REVIEW of BUSINESS & FINANCE STUDIES

VOLUME 12 NUMBER 1 2021

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Review of Business & Finance Studies

Review of Business & Finance Studies (ISSN: 2150-3338 print and 2156-8081 online) publishes high-quality studies in all areas of business, finance and related fields. Empirical, and theoretical papers as well as case studies are welcome. Cases can be based on real-world or hypothetical situations. All papers submitted to the Journal are blind reviewed. The Journal is published once per year by the Institute for Business and Finance Research, LLC. The Journal is distributed in print and through EBSCOHost, SSRN and RePEc.

This Journal is the result of the collective work of many individuals. The Editors thank the members of the Editorial Board, ad-hoc reviewers and individuals that have submitted their research to the Journal for publication consideration.

ISSN 2150-3338 (print) and ISSN 2156-8081 (online)

Review of Business & Finance Studies
Vol. 12, No. 1, 2021, pp. 1-30
ISSN: 2150-3338 (print)
ISSN: 2156-8081 (online)

IBFR
www.theIBFR.com

AMERICAN ECONOMIC NATIONALISM: CORPORATIST, NEOLIBERAL AND NEO-CORPORATIST POLITICAL STRATEGIC RESPONSES TO CONTEMPORARY GLOBAL SYSTEMIC CRISES

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ABSTRACT

The political theory focus of this paper is the relevance of corporatism to meet the nationalist backlash against the increasing global interdependence that elites encouraged through neoliberal strategies. The paper analyzes the Trump administration's resistance to international cooperation to counteract the negative externalities creating vulnerability to global crises. It thereby explicates the political assumptions and prescriptions underlying national strategic models of development. Great power competition for power and influence intensifies in an international political system in which the sources of power and influence increasingly depend upon sustainable development. It explores how reactionary populism emerges from perceived threat to core cultural group traditional supremacy within the national polity. This group heretofore set the institutionalized, stereotyped norm standards of individual and constituency behavior and relations. It highlights the foundational path dependency of the American state being reflected in contemporary American white populist status grievances. They utilize the language of conservative evangelical Christian identity to mobilize their social movement political resources. American foundational colonial ideologies in early modern capitalist plantation-based slavery and legacies of de facto casteism are a symbol set. Postwar emerging transnational normative authority centers reflected in international law progressively challenge the utilitarian relevance of these traditional, stereotyped norms and ethics.

JEL: E12, E14, E24, E61, E71, F52, F54, H12, H44, H56, J15, J16, J61, J71, J78, K15, K32, K38, L13, L33, L43, L52, M14, N32, N34, N42, N44, N62, O19, O25, O4, P11, P41, P50, Q28, Q38, Q48, Q54

KEYWORDS: Corporatism, Covid-10, Environmental Policy, Epistemic Community, Globalization, Interdependency, Judiciary, Neoliberalism, National Security, Political Strategy, Social Identity, Social Movements

"'Democracy isn't the objective; liberty, peace, and prosperity are,' [Republican] Senator Mike Lee of Utah tweeted last month. 'We want the human condition to flourish. Rank democracy can thwart that'"
(Bouie 11/2020, para. 14).

INTRODUCTION

The modal Trump enthusiast opposes transnational epistemic communities, presenting a unique threat to global cooperation to confront critical interdependency crises. This resistance lies partly in the white nationalist regime control base of the previous US Trump administration (Ward, 2018). Core group evangelical supporters of Trump tended not to see evidence of systemic racism in terms of systematic disproportionate use of police violence against African Americans. "In 2018 when PRRI [Public Religion Research Institute] conducted a poll that asked about recent killings of black men by the police, 70 percent of white evangelicals said they were isolated incidents rather than reflective of a broader pattern" (Peters, 6/2020, para. 35). Economic nationalism amidst unavoidable global interdependency incentivizes polity trends favoring functional corporatist approaches to managing this inter-reliance. These economic policies include the discipline of macroeconomics and its Keynesian neoclassical manifestation as its foundation. These trends interact with the international political system to display their prevailing institutional manifestations which in the postwar US has centered upon the development of the national security state. "Experts in both national security and health security see the [Covid-19] pandemic as a [US] national security threat. They note that China and Russia are expanding their sphere of influence by promising vaccines to other countries in need" (Sanger and Stolberg, 2020, para. 18).

Neoliberalism opposes social intervention to counteract the effects of white supremacy. It served as a reservoir of romantic symbol sets, i.e., the "American Creed," which is classical liberalism (Lipset, 1997, 143-44). "(Neo)liberalism" is a conservative ideological-"epistemological" justification denying the institutional legacy of segregation and "exclusion" that created contemporary diversity that necessitates state intervention for "equity." [Neo] "liberalism produces forms of exclusion based on difference, then denies the very existence of the difference that it produces" [*sic*] (Berg, 2012, 511). Transnational epistemic communities highlight global community vulnerability interdependencies due to systemic institutional exclusion. They are perceived as posing an imperial threat to the ethno-racial-sectarian nation state. These perceived threats are manifest in conspiratorial stereotypes (Cottam and Cottam, 2001). These transnational imperial conspiratorial stereotypes are analogues of Hobson, Lenin and Stalin's stereotyped perception of threat from transnational capitalism orchestrated from London and Washington. "The superior polity's bureaucracy will be viewed as monolithic and exceedingly rational, quite capable of controlling and orchestrating all phases of political and economic life in the inferior polity—whether de jure or de facto—with what is seen as a 'hidden hand' technique" (Cottam, 1994, 188).

This superior polity is presumably the transnational globalist community embodied in intergovernmental organizations like the World Trade Organization and the World Health Organization:

"Political scientists say it's no coincidence that four large countries where cases [of Covid-19] *have been increasing are run by men who presented themselves as anti-establishment and anti-elite. There are differences between the four -- President Jair Bolsonaro of Brazil, Prime Minister Boris Johnson of Britain, President Vladimir V. Putin of Russia and President Trump. But they all subscribe to versions of what Daniel Ziblatt, a professor of government at Harvard and co-author of the book "How Democracies Die," calls "radical right illiberal populism." And illiberal populists tend to brush aside the findings of scientists and favor conspiracy theories. Mr. Ziblatt's co-author* [Levitsky] *said they "claim to have a kind of common-sense wisdom that the experts lack. This doesn't work very well versus Covid-19""* [*sic*] (Barron, 2020, para. 14).

One impact of the Covid-19 global pandemic is the heightened awareness of US polity interdependency with global trends. Pandemic control policy responses include designating agricultural workers and grocery store employees as essential workers to the national community. The authorities previously classified these predominantly low wage earners as unskilled, including many undocumented immigrants. The pandemic response highlights the institutional legacy of marginalization and calls for state intervention for pay equity. "Over half of workers designated essential in the United States are women; their jobs are typically paid well below the median hourly wage of a little over $19 an hour" (Sussman, 2020, para. 5).

This policy of designating workers as essential highlights corporatist attitudinal responses to national crisis amidst mass perceived global interdependence. International cooperation is necessary for disaster relief to produce and dispense billions of SARS-CoV-2 vaccine doses. It portends a global expansion of multinational corporate and governmental collaboration. "Disaster capitalism" responding to calamities had previously displayed an orientation towards neoliberal policy advocacy by external donors. It benefitted both metropole-headquartered for-profit and non-profit entities (Schuller and Moldonado, 2016). The exponentially larger scale of the Covid-19 pandemic contributes to global political tensions. International influence competition between Russia, China and the US, may produce a new stage in global economic integration.

LITERATURE REVIEW

Keynesian vs Neoliberal Corporatism

The development of macroeconomics reflects the rise of corporatism as a national political strategy fundamentally incorporating international relations because of its focus on national systems. GDP is a transnational epistemic concept for critical comparison of diachronic epochs of a national community and synchronically with other national polities. It is a strategy reflecting economic nationalism. That is, it manages the economy for the national welfare in terms of generating the power capabilities for addressing national security challenges and nationalist motivations. As Keynesian macroeconomics has developed, it has been the foundation for de facto benign corporatism in industrialized societies. It is a policy strategy to achieve social welfare/social justice objectives, namely, "employment creation" (Dow, 2017, 34). These policy patterns involve government agencies increasing their economic sector intervention, while libertarian critics warn of consequent "crony capitalism" (Todd, 2017, 416).

In the midst of the economic dislocation that the Covid-19 pandemic engendered, one pundit, Farhad Manjoo (2020, para. 19) noted, "[n]ear the end of his Keynes book [*The Price of Peace: Money, Democracy, and the Life of John Maynard Keynes*], [Zachary D.] Carter writes that Keynesianism "is not so much a school of economic thought as a spirit of radical optimism, unjustified by most of human history and extremely difficult to conjure up precisely when it is most needed: during the depths of a depression or amid the fevers of war." That is, Keynesianism assumes the political capacity of liberal American state authorities in the form of the government to orchestrate societal constituencies and the power capacities they represent. These capabilities became globally hegemonic. Post-Cold War state models of development are geographically distributed according to socio-political international delineators. "US hegemony system of states and neoliberalism constitute thus a first globalization path that is now in crisis, opening up a trend toward multi-polar globalization having as a principal engine the irruption of China, the BRICS, and the Global South, as an unarticulated supranational hegemonic project" [*sic*] (Ordóñez and Sánchez, 2016, 25).

von Hayek neoliberalism is also a form of economic nationalism, fine tuning Keynesian macroeconomic management. It incorporates greater reliance on market forces, but a strong state was always a requirement to make it function. In this context, Dow notes that social redistributive government expenditures as a percentage of the GDP within the OECD countries have shown an inexorable increase. They grew from 17% of GDP to 22% in 1960-2015. "Despite all the efforts of activist regimes from Reagan and Thatcher to small-government advocates on both sides of Australian politics, neither government expenditures nor revenues have declined since the mid-1970s" (Dow, 2016, 263). Smith (2016, 332) notes that neoliberal public policy prescriptions responded to perceived dysfunctionalities of the immediate postwar social democratic growth in welfare state policies. "Public choice" policy applications since the 1980s include "new public management" approaches favored by the World Bank. "There is a narrative whereby the ideas of Hayek, which were marginalized during the historically short period of social democratic dominance that followed the Second World War, were taken up by politicians, think tanks and academics and influenced policy makers in the 1980s looking to solve the problems of big government. […] [W]hat is clear is that this sort of neoliberalism has been influential where governments have wanted it to be so."

Externally, neoliberalism's global expansion after the collapse of the Soviet Union was the essence of the "Washington consensus" (Gentile and Tarrow, 2009, 469). It was an American form of what Hans Morgenthau labelled "nationalistic universalism:" "Each nation comes to know […] a universal morality – that is its own national morality—which is taken to be the one that all the other nations ought to accept as their own" (Herrmann, 2019, 5-6, quoting Morgenthau, 1973, 252). To the extent that motivated reasoning drives foreign public opinions to accept these nationalistic universal claims of the initiator, the initiator generates influence over their thinking and behavior. Power is defined here as the "exercise of influence over the minds and actions of others" (Cottam and Gallucci, 1978, 4). These nationalistic universal claims combine with other power capabilities of the initiator. They thereby provide a psychological route by which to acquiesce to or support the expansion of the national influence of the initiator. History is littered with failures to persuade targets to accept this hegemony often because of the nationalism of the target community being evoked by the perceived imperial threat from the initiator.

Internally, regardless of party, when one party controls the US presidency and both houses of Congress, US government spending increases. "As is so often the case with one-party control, as in Mr. Trump's first years, big spending took hold. According to the Cato Institute, over Mr. Trump's four years, spending went up by a total of 10 percent. Something similar happened under George W. Bush: Spending shot up 24 percent" (Mair, 2020, para. 4). The eclipse of neoliberalism intensified amidst the Trump administration's response to the pandemic. It indicates the movement of American economic nationalist policies more consciously in favor of corporatism. It constitutes a movement towards convergence with the Beijing consensus, i.e., state-led corporatism. "If Mr. Trump did anything, [American Enterprise Institute scholar] Mr. Levin said, it was to shatter the notion that voters want Republicans to talk about smaller government. "A lot of people have been instinctively, reflexively saying, 'We can't be spending this kind of money right now.' And I'm thinking, what voters want that? Who's saying don't give us money?" he said" (Peters, 11/2020, para.18).

Hall analyzes four different "domains" in American climate change discourse to compare and contrast their respective articulation of their orientations: "science and policy analysis, conservative skepticism and denial, geopolitical security and environmental movements" (Hall, 2016, 1). His analysis of geopolitical security contains one sole reference to "international competition" over arctic natural resources that will become available for exploitation due to retreating sea ice (Hall, 2016, 28). This analysis suggests that the American nation state authorities will functionally mobilize American nationalism as a value to integrate these domains and their respective constituency carriers. In contrast, western European societies developed political cultures through centuries of state-sanctioned churches legitimating hierarchical authority (Lipset, 1997). A perceived national security threat from China's global influence will critically shape American leadership. It will oversee the integration of constituency attitudes regarding climate change to produce a strategic thrust.

The targets against which to mobilize will be external challengers to American global influence, namely China. Hall does not explicitly discuss nationalism, but he refers to other theorists who have observed how the authorities manipulate nationalistic self-identity status drives:

"As the Italian sociologist Pareto (1966) theorized early in the twentieth century, the body politic is not always moved by rational argument, even less by assertions of brute interests. Rather, Pareto argued, political discourse can more easily motivate individuals by deployment of superficially persuasive 'derivations' that appeal to deep-seated, unconscious, and irrational 'residues' such as the integrity of the individual or the honor of the group. Similarly, Mills (1940) noted the tension between 'situated actions' by which people pursue their interests and the 'vocabularies of motive' by which they frame supposed intentions behind actions." (Hall, 2016, 22).

A successful corporatist American national strategy for responding to global polity crisis challenges derivative of globalization will accommodate and incorporate the political psychology of nationalism. The imperative is to channel this nationalism in a cosmopolitan direction as per the European integration movement, but ultimately on a global scale. Pro-globalization constituencies are already coopted into cosmopolitanism with global integration tending to affirm social mobility and creative identity opportunities. Remedies for reactionary populism require promotion of foreign direct investment while developing the American welfare state social safety net. A necessary condition is the continuing reconfiguration of labor as a human resource factor of production in the de facto American national state-corporate entity as part of a neo-corporatist political strategy.

American Nationalism and Corporatism

A challenge for corporatist intervention in the US is the relative absence of American class self-identity stratification. Lipset (1997) highlights that states with strong aristocratic hierarchical class pedigrees including a state-sanctioned church developed more pervasive welfare state policies. They acquire bureaucratic administrative instruments to implement these corporatist policies that undercut the potential for class-based social strife. These aristocratic hierarchical, state-church formed polities institutionalized belief in class differences and ingroup/outgroup identities. English colonies in North America were founded by White Anglo-Saxon Protestant (WASP) immigrants belonging to a militant Calvinist congregationalist sect (Zafirovski, 2014). They tended to deny the legitimacy of aristocratic class privilege (Lipset, 1997). American white identity came to deemphasize intra-racial class stratification replacing it with a racial phenotype-based caste hierarchy marginalizing African Americans most intensely.

That is, most Americans have considered themselves so-called middle class despite high income inequality among whites. Class identity stratification in Europe and east Asia explains the formation of powerful socialist movements and political parties. These movements interact with ruling class principles of *noblesse oblige* to develop pervasive welfare states to stabilize these regimes. In contrast, Lipset (1997, 156) describes the American Creed as “the nation's ideology” that “can be described in five words: liberty, egalitarianism, individualism, populism, and laissez faire” [*sic*]. It comparatively tends to delegitimate government intervention to redistribute wealth to pursue social justice.

Corporatism is more problematic in the American context. Dominguez (1998, 4647, fn. 29) identifies corporatism as governmental authorities licensing and managing the forms of societal representation. It corresponds with their “supervision of the patterns of relations between labor and management.” The modal American WASP citizenry is comparatively less likely to grant legitimacy to governmental official representatives of the American state intervening to manage capital-labor relations. American ideology denigrates class stratification among whites. It makes class ingroup self-identification with trade unions and the political parties reliant upon them comparative less intense and salient and more amorphous. According to Lipset (1997), as with European proletariats, collective, ingroup values associate more strongly among Blacks because of their history of collective enslavement and exclusion in the US context.

American establishment political discourse tends to reflect an ideological rejection of the role of state authorities intervening in American civil society to supervise societal relations. This rebuff is reflected in the condemnation of what right-wing observers refer to as government so-called social engineering. For example, Dr. Ben Carson, Secretary of Housing and Urban Development in the Trump administration, announced the retraction of a 2015 Obama administration regulation requiring localities to identify and rectify patterns of suburban housing segregation: “in his announcement […], Dr. Carson called the old rule "a ruse for social engineering under the guise of desegregation"” (Fuchs, 2020, para. 22).

American state authorities as societal intercessor and leader face more political resistance to occupying this role than European and east Asia national policy makers. The American public is more likely to grant the authorities de factor legitimacy in this role in regard to national security from a perceived foreign threat. For example, US postwar space policy was a response to the perceived intense threat from the USSR. A Covid-19 pandemic crisis reporter (Segal, 2020, para. 18) labelled the US Apollo program as “a pioneer in public-private partnerships.” NASA supervised 20,000 companies to create and assemble the millions of parts for each mission. The US-government led effort to partner with pharmaceutical companies to develop a SARS-CoV-2 vaccine has been characterized as a US industrial policy. “The project -- called Operation

Warp Speed -- amounts to a sprawling, on-the-fly experiment in industrial policy by a Republican administration that has been otherwise dedicated to giving private industry a free hand" (Weiland and Sanger, 2020, para. 12). Pfizer corporation's November 2020 announcement of late-trail evidence of +90% effectiveness in stimulating an immune response to the virus led Vice-President Mike Pence to tweet: "HUGE NEWS: *Thanks to the public-private partnership* forged by President @realDonaldTrump, @pfizer announced its Coronavirus Vaccine trial is EFFECTIVE, preventing infection in 90% of its volunteers" [emphasis added] (Dale, 2020, para. 3).

The US national security establishment has for years supported the creation of start-ups to generate technologically advanced products which the civilian sector had not provided. 2018 media reports highlighted the departure of Eric Schmidt as chairman of Google amidst criticism of his advocacy to work with the US military to develop its artificial intelligence capabilities (Conger and Metz, 2020). "Schmidt now sits on two government advisory boards aimed at jump-starting technological innovation at the Defense Department. […] And through his own venture capital firm and a $13 billion fortune, Schmidt has invested millions of dollars into more than half a dozen defense startups" [*sic*] (Conger and Metz, 2020, para. 6). US neoliberal political representatives rhetorically reject industrial policy while concurrently supporting policies that rebuild a domestic manufacturing supply chain for products essential for America's power potential base. For example, "[a] spokesman for [U.S. Texas Republican Senator Ted] Cruz said the senator was only interested in building a domestic supply chain [to produce so-called rare earths metals, heretofore outsourced mostly to China], and not pushing on behalf of any specific company. "The government should never pick winners and losers, which is a task for the marketplace," he said in an email" (Montague, 2020, para. 11).

<u>Social Identity and American Nationalism</u>

Cottam and Cottam (2001) apply social identity theory from social psychology to analyze the political psychology of nationalistic behavior. They note that individuals seek to maintain a positive self-image while engaging in social comparison while concurrently forming ingroups vs. outgroups. Actors compare their ingroups with one another and may perceive their status as inferior and thus their self-image turns negative. The perceiver can respond with three psychological and behavioral strategies. One strategy is individual social mobility, i.e., attempt individually to join the perceived superior status group. A second strategy is social creativity, i.e., the perceiver compensates by changing the evaluation criteria, selecting those on which the perceiver views their ingroup as superior over the outgroup. For example, 'my Native-American people are marginalized, but we are out in front fighting global climate change by resisting fossil fuel industry oil pipelines crossing our territory.' A third strategy is open intergroup conflict, i.e., social competition, in which the ingroup perceiver views the relationship with the outgroup as zero-sum. Any gain by the outgroup is perceived as coming at the cost to the ingroup. National self-determination movements by definition seek, at times violently, to break the relationship through secession to form their own sovereign, i.e., legally equal, community.

Generating and exploiting social creativity opportunities requires that marginalized communities be well-organized with representatives speaking for the ingroup. Until recently, the US authority system has often coopted Black potential and actual leadership. As a consequence of slavery era white self-justificatory motivated reasoning, African Americans were stereotyped as backward as part of their marginalization. This perceptual awareness existed within the African American community of its institutionalized lower socio-economic and political hierarchical status. Cottam and Cottam (2001, 274) advocate making available opportunities for integration for those members in the marginalized, stereotyped condition beyond their expectations and persuading them to take advantage of those opportunities. Thereby, these prevailing stereotypes of self and other may disintegrate. A large gap exists between principled recognition of racial inequality and inclination to implement those policies even though people know that racism is unacceptable and that stereotypes are oversimplifications. That is, the racism "often goes underground."

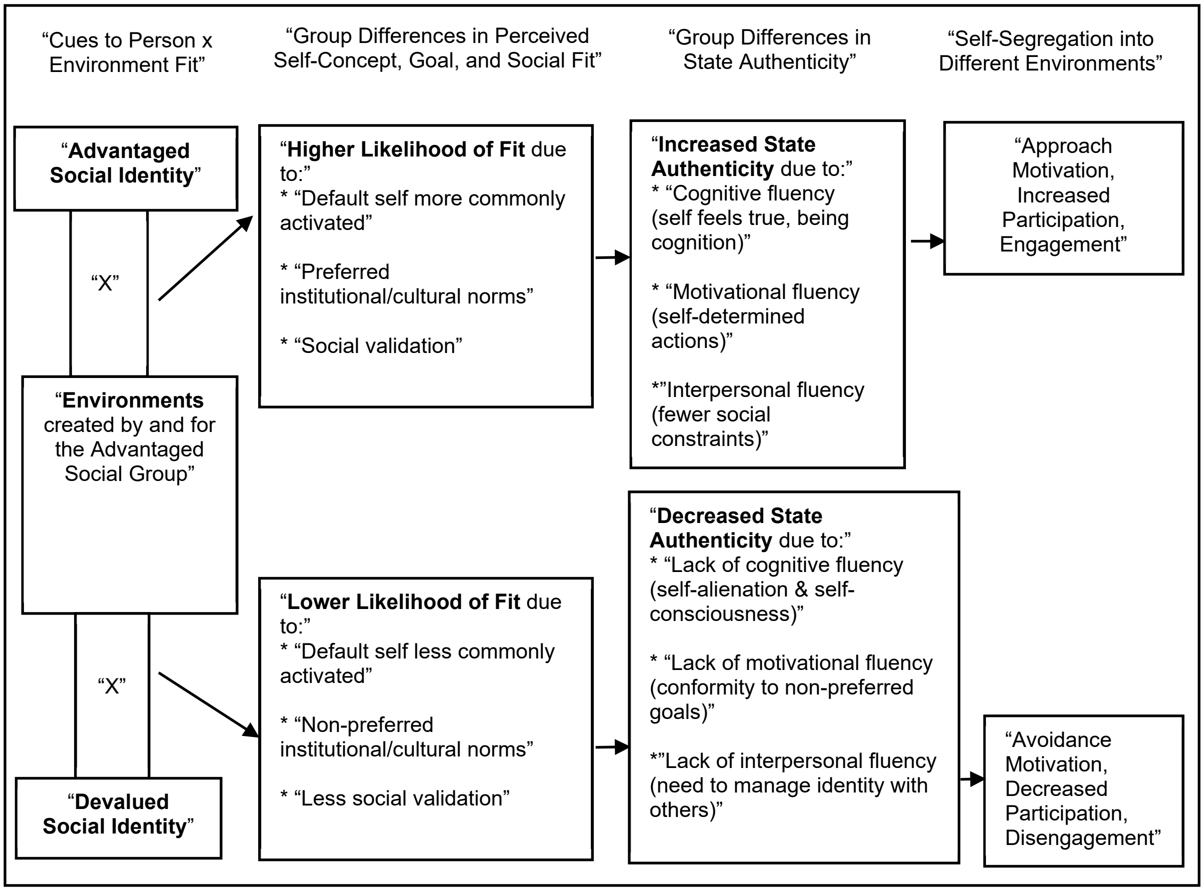
Cottam and Cottam (2001) continue that African Americans often reject opportunities which aim to reduce the social and, especially, the economic distance between them and whites. Many African Americans are skeptical when they hear of new opportunities suddenly open to them which is not surprising after a long history of exclusion. In order to avoid rejection, they may assume that their chances of acquiring acceptance are low. They may know personally or vicariously the performance difficulties and interpersonal stresses which associate with being a minority in a context under the domination of a majority. They may decide not to participate even if the chances of acquiring acceptance are high.

The cost of this US racial history which is one of pervasive conflict makes remedial action more difficult. This explanation is not putting the blame on the victim. For the purpose of integration, diminishing and ultimately eliminating discrimination is essential but insufficient. Attracting individuals with the necessary qualifications in the systematically marginalized community or communities into positions which exceed their expectations is necessary. It is a key aspect of the utilitarian formula in this case for creating expectations of real opportunities for social mobility and social creativity. The great difficulty of putting the US affirmative-action equity program into effect is a model of these problems, as well as simultaneously being a model of such an integration formula.

Cottam and Cottam (2001, 75) argue that dominant group individuals and groups have an inclination towards the contemptuous image of the marginalized which is implicit in the colonial stereotype. The systematically marginalized group is stereotyped as responsible for its situation because it is culturally and capability inherently inferior. The core, hegemonic cultural group will make the case that an affirmative action program has ideology as its driving force. Affirmative action allegedly ignores the certainty that many of the individuals acquiring placement lack the requisite qualifications. The rejectors of affirmative action continue that placement of these individuals in positions in which they cannot perform adequately is damaging to these individuals. It is also purportedly damaging to those individuals in the achieving community who do have these qualifications. Members of a minority identity community which the dominant majority community views as underachieving will receive fewer opportunities. They are in the aggregate inferior in education, income, social standing, and so on. They know this situation exists, so the stereotype can become “a self-fulfilling prophecy.”

Figure 1 below portrays the social psychological consequences of integration and assimilation, on the one hand, and segregation and marginalization, on the other hand. Groups that integrate and assimilate into the core culture of the state enjoy heightened individual social efficacy via self-identification with the national community. Historically, i.e., institutionally, marginalized groups are more prone to demonstrate the social psychological consequences that causally associate with social segregation.

Figure 1: "The Implications of Social Identity for Fit, State Authenticity, and Self-Segregation"



Marginalized communities within the state are prone to being subject to negative stereotyping by the core ethno-cultural group that dominates the state, which is typically but not always the ethno-racial majority. For example, in apartheid-era South Africa, the core cultural group was Boer, into which white minorities assimilated and into which assimilation by other racial groups was extremely difficult, not the least because it was legally forbidden. Minorities self-servingly stereotyped by the core as backward and underdeveloped may internalize this institutionalized segregation and marginalization as making status advancement an unachievable goal. The inevitable sting of failure is assumed as most likely to be the result of efforts to advance one's societal status (Figure 1 from Schmader and Sedikides, 2018, 235).

In creating and ensuring the survival of a social identity with a political basis, state institutions can provide and promote the elements necessary to do so. State institutions can do the following: 1) create a common identity, 2) provide roles, 3) generate norms and 4) insure the incorporation of nonmembers into the group as loyal members (Cottam and Cottam, 2001). The state has been conceptualized as that which has a monopoly on the legitimate use of force in society (Lottholz and Lemay-Hébert, 2016). If the state is conceptualized as a system of ethical authority norms, then it can be construed to include neoliberal and libertarian morals and ethics of the right, for example, to use of deadly force in self-defense. If a polity adopts this policy, then it is part of the state. It can only have a monopoly if a legal system adopts it by choosing action, including a choice to refrain from action, i.e., allow use of deadly force by individual citizens. Citizens' arrest and so-called "stand your ground" American laws also apply here (Jonsson, 2020).

The state authorities license relations by providing social mobility and social creativity options to elites representing constituencies. If they accept social mobility opportunities, then they assimilate. If they continue to demand social creativity opportunities, then they seek to integrate their constituencies. Disinformation seeks to promote social competition, i.e., intensifying polarization and division. Providing these social creativity opportunities for group integration thereby reduces barriers to individual social mobility. An empowering, mobilizing belief in a supraordinate community must be constructed and encouraged. Discourses about the transnational African diaspora are an example of the articulation of such a supraordinate community, and the awareness and belief in its existence is an example of an imagined community shaping behavior. Globalization's increasing constrictions on the decisional latitude of leaders is an indicator of these supraordinate imagined communities developing in an institutionalizing, i.e., superordinate, direction. These policy-making process restrictions emerge via strengthening trends in perceptions, attitudes and values among increasingly influential respective constituency carriers. As examples of how this self-identification with a supraordinate community, Jamelle Bouie highlights how Black leaders of the American civil rights movement were disproportionately immigrants or children of immigrants:

"The rigidity of race hierarchy in the United States is one important reason that African-descended people from other parts of the world have identified with, and identified themselves as, Black Americans once in this country. They, too, were bound to the fate of the descendants of American slaves, thrown into this process of group formation. A quick look at some of the most prominent figures in Black American history will prove the point. Marcus Garvey, one of the most significant Black nationalists of the 20th century and the founder of one of the largest Black fraternal organizations in American history, was a native of Jamaica. Kwame Ture, born Stokely Carmichael, leader of the Student Nonviolent Coordinating Committee in 1966 and 1967, was born in Trinidad. Shirley Chisholm, the first Black woman elected to Congress and the first Black woman to compete for a major-party presidential nomination, was the daughter of immigrants from Barbados and British Guiana. Sidney Poitier, Harry Belafonte, Colin Powell -- the list goes on" (Bouie, 8/2020, para. 17).

US President Barack Obama would also be added to this list as the son of an African immigrant and a white American mother. Bouie (8/2020) asserts that the North American African American diaspora is a Black supraordinate diaspora. The British empire's trans-Atlantic slavery-based political economy encompassed the entire region, including Jamaica, the birthplace of US Vice-President Kamala Harris' father who emigrated to the US. Hence Harris is Black despite right-wing Trump supporters questioning Harris' representational status vis-à-vis today's American descendants of enslaved people (Eastman, 2020). The supranational components of the African diaspora liberation social movement appeared in the Black Lives Matter support protests in Bristol, UK following the George Floyd killing-triggered protests in the US in late May 2020. The protestors tossed the statue of Seventeenth-Eighteenth century slave-trader and city benefactor Edward Colston into the sea (Landler, 2020).

These supraordinate communities must increasingly become superordinate. That is, they should be perceived and believed to provide substantive material and self-identity ideational status benefits in order to create social creativity opportunities. The institutionalization of new social creativity opportunities leads as well as to additional individual social mobility opportunities. For example, Jamaican music has become congruently a marker of self-identity creativity and lucrative material benefits. Many of its cultural elites representing the community produce cultural products for consumption (Lowe, 2018). Reggae music's association with cannabis is another example of the interrelation between material and ideational social creativity development as marijuana is progressively legalized in the US. Indigenous communities acquiring collective self-identification as part of a global diaspora existing as a consequence of the legacy of colonial, plantation slavery-based early capitalism may intensify. Legal judicial systems as the institutional foundation of European core culture-based states in the so-called "New World" share structural marginalization legacies towards the descendants of the despoiled. These degraded are the "wretched of the earth" as described by Franz Fanon (1968). The American legal system is moving in the direction of civil law states in functionally seeking to integrate these minorities. The functional aim is to maintain regime stability.

Global Interdependency, Social Movements and Neo-corporatism

The interrelationship of these three behavioral trends becomes more obvious, e.g., as women moved into the workforce over the last 50 years out of economic necessity. The Covid-19 pandemic and the shelter-at-home enforcements it has necessitated has intensified the contradictions between traditional gender role identity and the rapidly changing economy. One *New York Times* participant observation piece on this issue continued to generate letters in response to it, weeks after it was published on July 5, 2020. The writer highlights the intense distress she and her family are facing as a consequence of schools being closed with working parents now responsible for providing childcare 24/7. She responds to hypothetical rejoinders from interlocutors to whom the writer has shared her despair:

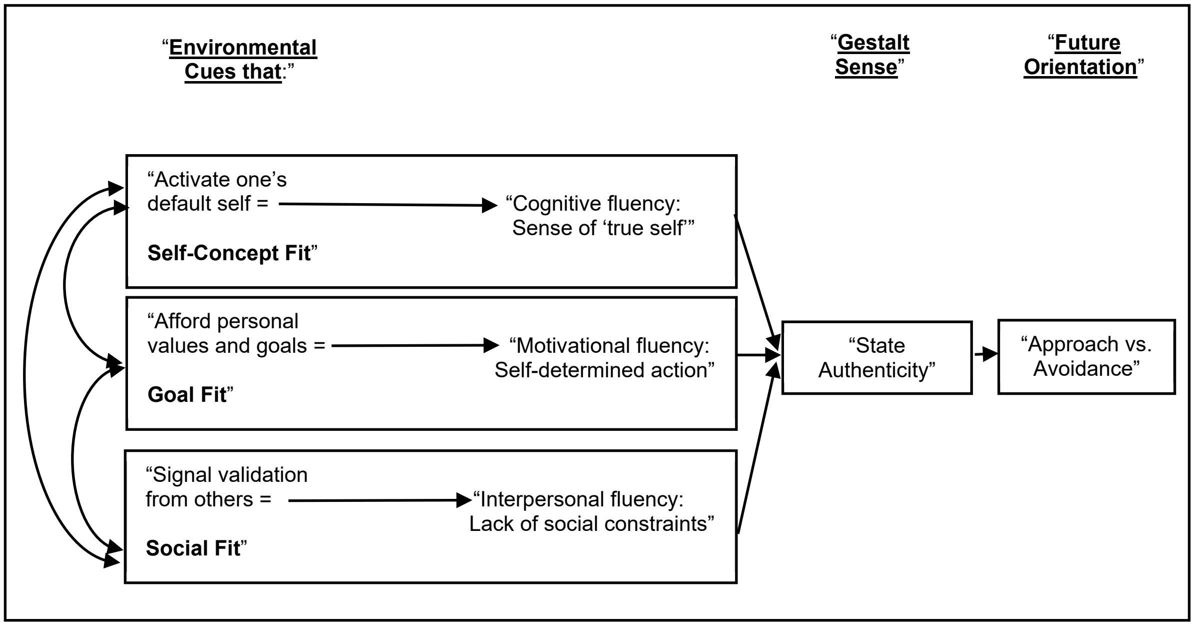
“"Why aren't you enjoying the extra quality time with your kid?" lays bare what is really simmering below the surface -- a retrograde view that maybe one parent (they mean the mom) shouldn't be working, that doing so is bad for children, that it's selfish to pursue financial gains (or solvency, as working parents will tell you). It is a sentiment so deeply woven into our cultural psyche that making the reasonable suggestion that one shouldn't have to abandon a career or livelihood if offices reopen before schools, day cares and camps do is viewed as a chance to redeliberate this” (Perelman, 2020, para. 10).

Extended societal disruption generates an incentive to shift away from normative habitual parochialism because it provokes questioning of what had habitually been assumed or at least kept unspoken. A response of the evangelical right has included a backlash against challenges that upend traditional WASP romanticized stereotypes about patriarchy and racial division and differentiation boundaries (Milbank, 2020).

The government representing the state overseeing the integration of intergroup social relations is a foundational principle of neo-corporatism. It thereby undercuts societal polarization contributing to regime destabilization. It may incorporate volunteerism and partnerships of local government non-profits and businesses, as well as for-profit contracting. One functional necessity is to oversee the socialization of the next generation of citizens. How a polity undertakes these tasks depends upon its unique history and characteristics, but it is a facet of the welfare state. Its ultimate function is the welfare of the national community. For the state to assume more corporatist tasks in the US, the national community welfare is comparatively more likely to be securitized within political discourse. For example, the Obama administration after the 2014 Ebola virus outbreak placed pandemic preparedness responsibility within the US National Security Council. The Trump administration subsequently abolished the NSC’s “Directorate for Global Health Security and Biodefense” (Klarman, 2020, 100). US President Biden restored it (Daley, 2021).

US military officials and institutions have played leading roles in national emergency policy to develop and distribute SARS-CoV-2 tests and vaccines (C-SPAN, 2020, Owermohle, 2020, Stolberg and Wu, 2020). Effective regime control strategies utilize corporatism to harness the social identity dynamics of mobility and creativity to integrate a political community. The social class focus in benign, neo-corporatism is useful insofar as it allows for the legitimation of win-win outcomes as part of development policy. It may thereby promote not only individual social mobility but also social creativity opportunities for integration by contributing to the pluralization of the American ethno-racial nation state. Integration facilitates mobilization and more full utilization of American national human resources. The institutions of the American state pluralize, i.e., facilitate the ease of social creativity and social mobility for heretofore marginalized groups and their individual members, respectively. Figure 2 below highlights one scholarly conceptualization of the social psychological results of effective integration of these heretofore marginalized groups.

Figure 2: "The SAFE [*S*tate *A*uthenticity as *F*it between one's identity and the *E*nvironment] Model: State Authenticity as Fit to Environment"



A society that effectively integrates all historically marginalized groups is more likely to exploit more fully the human resources potential available to it. As all citizens view themselves as enjoying genuine equality of opportunity amidst the citizenry's ethno-racial, sectarian and gender diversity, greater attitudinal propensities favoring ambition and striving to achieve goals can emerge. Achieving this attitudinal transformation requires effective demonstrations of representatives of marginalized representatives achieving surprising and unexpected levels of influence and status. The modal citizens of these historically marginalized groups must be the targets of the promotion of this perception, requiring genuinely representative members of their leadership succeeding (Figure 2 from Schmader and Sedikides, 2018, 229).

The Cold War shaped the development of the US welfare state,

"Yet, displacement [of economic resources away from social welfare needs following a military conflict (BD)] *could also occur by pursuing new military or quasi-military projects (for example, during the Cold War), with the shift to welfare-state priorities neglected in nations which, by virtue of their Great Power status, continued to prioritize military spending. With respect to the United States, this may explain why the promises of President Roosevelt were only partially honoured"* (Obinger and Petersen, 2017, 218).

The expansion of the US national security state may also be an intensifying trend following emergency centralization amidst societal costs and polarization amidst the Covid-19 pandemic. This trend will intensify concurrently with intensification of a perceived challenge from another Great Power, e.g., China. Alternatively, democratic participation in the policy making process through international and transnational actors may support international social creativity integration trends. Public political participation is an essential feature of modernity. Incorporating participation in international governance strategies, e.g., the European Union, is challenging because of the identity value of nationalism. The socio-economic class focus in benign or neo-corporatism is useful insofar as it allows for the legitimation of win-win outcomes as part of development policy. The US and China cooperate with the European Union, but European mistrust of more volatile Chinese and American nationalist populism and militarism weakens their appeal. [French President] "Macron has been the European Union's most forthright voice, calling for investments in more jointly developed European military equipment and deploring the bloc's technological dependence, whether on China or, as he put it, 'even on an ally like the United States'" (Cohen, 2021, para. 4).

DATA AND METHODOLOGY

Nationalizing, Securitizing, Evaluating and Monetizing Labor Contributions to American GDP

Keynesian macroeconomics is a consequence of the rise of the nation state amidst growing recognition of global national interdependency. It is consequently comparative in nature, and it can change as the Wolfers (2020) suggests regarding "defense services" being incorporated in GDP calculations. Yet these calculations today do not include effective pandemic social distancing by workers on paid furlough/unemployment insurance. Paying for services that are tools for providing collective security goods is incorporated into GDP figures because those products are purchased by the government representing the nation state. The individual service providers of this Second World War public good, soldiers, were paid a salary which was incorporated in GDP as part of the government budget. Paying people to go into lockdown with unemployment and other benefits is also in effect a salary for the national public good of public health. It is incorporated into GDP figures through federal government spending while accelerated technological changes may provide lasting national efficiency and competitiveness gains. It can potentially increase national mobilization and capability base by increasing the flexibility in authority utilization of national resources. A massive public infrastructure rebuilding program after the Covid-19 pandemic would be exemplary. A great, rapid increase in employment through reallocation of resources will work to prevent labor skills from deteriorating.

Neo-classical macroeconomics is a tool kit for economic nationalism. It seeks to protect and promote not only the economic well-being of the citizenry but maintain social order and control as well as to defend the nation. A recurring motif in news reporting is that the Second World War demonstrated the capacity of national mobilization for defense, ending the Great Depression and its unemployment. According to one estimate, US GDP increased by 72% between 1940 and 1945 (Fishback, 2019). One media analysis highlighted that those vast expenditures on military personnel were counted in the US GDP, presumably because they were providing defense services to the US. Yet, those who quarantined themselves deployed their physical and mental resources to arrest the spread of the coronavirus to protect public health and the long-term US economic recovery. That service per se is not being fully or adequately calculated in the US GDP. Some are consequently unemployed, and they are receiving US federal government bonus unemployment benefits and other forms of US government financial support. In this sense they are being paid and that federal budget expenditure is included in GDP calculations:

"This doesn't change the reality that in the war against the coronavirus, people who are staying home are producing valuable "public health services," much as soldiers produce "defense services." Indeed, if we paid them through the government payroll rather than the unemployment insurance system, the same accounting conventions would suddenly count that money toward GDP."

"In a typical recession, millions of people could be more productive if they could find work, but economic dysfunction robs them of this opportunity. This downturn is different. In the pandemic economy, the most productive thing that many people can is stay home. "Reopening the economy" may be the wrong way to look at it. The question is when is the best time to shift what we are producing."

"A truer measure of output would recognize that collective output hasn't fallen; it has merely shifted so that we're producing less "stuff" and more public health. And it would show that economic dysfunction isn't the main problem right now; the coronavirus is" [emphasis added] (Wolfers, 2020, para. 27-29).

This report highlights the importance of economic nationalism as a component of macroeconomic theory in the past. It also indicates how it may develop in the global context of ineluctable interdependence and the increasing frequency of short, medium and long-term crises. In the nuclear setting, national security defense has increasingly shifted from focusing on the perceived threat of direct military attack. Perceived threat assessments focus on foreign challengers intensifying and exploiting domestic polarization to disrupt governing institutional authority (DeDominicis, 2019). The threat may also be due to societal institutional disruptions due to Anthropocene-era disasters. The current vast pandemic calamity preludes threats to domestic institutional relations in responding to meteorological disasters emerging from anthropogenic climate change. “The question is when is the best time to shift what we are producing” (Wolfers, 2020, para. 28). Minimizing societal dislocation to maintain authority control through state policy leadership strategies for resource allocation in response to crises embodies the history of corporatism. This recognition appears to be slower in the US contributing to the comparatively less developed American welfare state. The disruptions of the Covid-19 pandemic exacerbate structural citizenry inequalities, e.g., women as mothers disproportionately pressured to choose between employment and child-rearing. This lag has contributed to

“the feminization of poverty. Jenny Brown, the author of "Birth Strike: The Hidden Fight Over Women's Work," writes, "Parents, particularly mothers, become poorer because they are not properly compensated for the contribution they're making to the continuation of society by bearing and raising children."”

“What exactly is the value of this contribution? The birthrate in the United States has fallen to a record low of 1.73. People who complain that other people's children shouldn't be their concern will still have to deal with the economic catastrophe of an aging population and a shortage of young, healthy workers. If raising these future citizens isn't socially necessary labor, I'm not sure what is.”

“And yet our entire economic system hinges on the willingness of women to do this work for free. Caretakers who work outside the home are poorly paid, but those who care for their own kin, in their own homes, aren't paid at all. They receive a wage of zero dollars and zero cents, no health insurance, no sick leave, no paid time off, no 401(k)” (Brooks, 2020, para. 11-13).

The creation and expansion of state-wide institutions creates incentives for perceiving inequality and public policy prescriptions to rectify the inequalities preventing substantive citizenship equality.

Wolfers (2020) journalistic analysis argues that “public health services” should also be counted in their contribution to the GDP as “defense services” have been, especially during the Second World War. Feminists have long pointed out that the homework of women in taking the dominant role in raising and socializing the next generation of citizens is not remunerated. It also is not counted in the nation’s GDP. It is has become more obvious with the declining institution of the traditional married couple with the male as breadwinner and the female as homemaker. Women are needed for the globalizing workforce, and the state is subsidizing, i.e., implicitly paying for, childcare and socialization, through various subsidies. The state has long paid the salaries of education workers in schools as institutions also socializing the next generation of citizens. The same is increasingly being done with women as childcare providers, to the consternation of traditional patriarchy supporters. That is, the men and women already coopted into the traditional, normative habitual status quo. In her Covid-19 pandemic opinion piece regarding the status of women and caregiving, Brooks notes that the American state in the form of the judicial system monetizes caregiving/caretaking:

“I have a lot of thoughts about marriage and divorce, but one is how peculiar it is that it is only through divorce that the work a wife has done as a primary caretaker is given a monetary value. This comes in the form of what used to be called alimony and is now called maintenance. These settlements, the lawyers say, are meant to be "rehabilitative." I've always thought of rehabilitation as a process involving one's recovery from injury. In this case, the injury is marriage and motherhood” (Brooks, 2020, para. 9).

Traditionally caregiving/caretaking is an occupation in which women overwhelmingly predominate. In the midst of her own divorce, Brooks calls for caregiving/caretaking to be recognized as an occupation requiring remuneration independently of marital status.

In the reconceptualization of social relations, i.e., recognizing care giving as a public good issue of greater importance, women gain not only more opportunities for social mobility by material support. They also gain recognition of their status as forming the next generation of citizens of the state, i.e., they gain greater opportunity for social creativity. The modern welfare state generates and distributes opportunities for social mobility and social creativity to deescalate intensifying, polarizing social competition. It may not be successful in multinational states, at least not under a democratic system, but it may work in compound identity nation states like the US if allowed to do so by the WASP core (Cottam and Cottam, 2001). The welfare state is about regime maintenance in the era of mass politics and political awareness and participation. This era, along with formation of large primary terminal identities, also pushes for the development of statewide institutions, i.e., social mobility and social creativity opportunities for the politically aware. The shaping of these statewide institutions is a functional goal and effect of social movements among societal actors seeking social mobility and social creativity opportunities (Tarrow, 2012). That is, differences must be accommodated rather than used as a basis for ascriptive hierarchical societal status differentiation.

For example, women must not be professionally negatively evaluated as an ascribed group within the economic and business sector because they become pregnant while men do not. The state must step in and provide childcare support as well as educational policy changes to satisfy national citizenship self-identity status equivalency demands. Senator Elizabeth Warren at the 2020 Democratic National Convention described childcare as part of the US national infrastructure. “We build infrastructure like roads, bridges, and communications systems so that people can work,” she said. “That infrastructure helps us all because it keeps our economy going. It’s time to recognize that childcare is part of the basic infrastructure of this nation — it’s infrastructure for families” (North, 2020, para. 22).

RESULTS AND DISCUSSION

American Exceptionalism

Whereas evangelical Protestantism is sectarian American nationalistic universalism, neoliberalism is its secular descendent and form. Neoliberalism focuses on private sector interests in the American polity, while political evangelicalism focuses on civil society church interests. Secularism is under challenge globally because it does not provide satisfying emotional gratification to those who are not enamored of scientific progress because they cannot participate satisfactorily in it. White Anglo-Saxon Protestant culture dominated what became the modern American nation state, into which subsequent European migrants assimilated, overcoming differing degrees of resistance. WASP culture and the stereotypes that associate with its institutions became the core assumptional bases for moral and ethical norms including towards authority, i.e., the “American Creed” (Lipset, 1997, 143-44). White dominance and the religious and ideological justifications for this supremacy, i.e., motivated reasoning, emerged to justify marginalizing those enslaved and those who were dispossessed of their lands. These self-justifying, cognitively balanced perceptions of in and outgroups and their members contributed to prevailing respective attitudes/worldviews/beliefs among racial majorities and minorities. Societal change, punctuated by violence, e.g., the American Civil War, made the rhetorical public advocacy of white supremacy increasingly problematic.

Affirmation of self-identification with an affinity ingroup is a significant causal factor for motivated reasoning behind the interpretation of facts producing social meanings of these facts. “[I]deologically motivated reasoning is in fact expressively rational at the individual level, because it conveys individuals’ membership in and loyalty to groups on whom they depend for various forms of support, emotional, material, and otherwise (Hillman, 2010; Akerlof and Kranton, 2000)" [*sic*] (Kahan, 2013, 419). Notably, Kahan continues, "Not all risks and policy-relevant facts have this quality; indeed, relatively few do, and on the vast run of ones that do not (e.g., that pasteurization removes infectious agents from milk*; that fluoridation of water fights tooth decay;* that privatization of the air-traffic control system is inimical to air safety), we do not observe significant degrees of ideological or cultural polarization" [emphasis added] (Kahan, 2013, 419). The John Birch Society had a leadership role in opposing water fluoridation, alleging it to be part of a Communist conspiracy "to destroy America's children" (Stewart, 2002, 430). It publicly associates itself with Joe McCarthy's legacy (Ibid., 426). It has been described as a reactionary authoritarian populist precursor to the alt-right nationalist base of Trumpism (Heikkilä, 2017, 3).

One pundit has noted that Trump's reactionary populism is the latest in an American conservative tradition of rejection of scientific evidence: "Conservative antipathy to science is nothing new; Republicans have long denied and denigrated the scientific consensus on issues from evolution to stem cell research to climate change. This hostility has several causes, including populist distrust of experts, religious rejection of information that undermines biblical literalism and efforts by giant corporations to evade regulation" (Goldberg, 2020, para. 8). Some Trump core enthusiasts respond positively to denouncements of science-based findings. These findings support policy responses increasing government regulation of economic and social behavior in order to respond to the Covid-19 pandemic crisis. Some portray them as part of global conspiratorial threat to national sovereignty involving the transnational business and scientific communities:

"Everyone who had a pre-existing conspiracy theory about health, or world government, or religion, they've all jumped on to the Covid bandwagon. […] *the pandemic has offered an umbrella under which a bevy of fringe conspiracy groups and far-right actors have found common cause. Cam Smith, an independent researcher who focuses on conspiracy theorists and the far right, says links between previously discrete groups including the sovereign citizens [movement], anti-vaxxers, QAnon and anti-5G groups have increasingly blurred during the pandemic"* (McGowan, 2020, para. 14-16).

Members of the American WASP core state culture group are more likely to have internalized norm idealizations habitually, more or less unconsciously assuming them to be normal. For example, 'big government is bad!'

[…] *"*[M]*embers of high-status groups* [e.g., WASP] *are likely to consider the in-group superior on relevant dimensions* [i.e., state authority]*, whereas members of low-status groups display in-group favoritism on less relevant dimensions. This would be consistent with our previous argument that low-status group members may perceive a realistic opportunity to claim in-group superiority only on dimensions which are not directly related to the groups' status positions"* [*sic*] (Ellemers and Van Rijswik, 1997, 54).

Progressive social movements by their nature tend to seek to diversify the actual American core, authority ethical norms system. These actual prevailing patterns of societal interaction emerged historically upon the basis of white supremacy. To modify them requires intervention by the state authorities, who tend to demur to avoid disrupting the political system and constituencies that empower them as the authorities. Social movements as sustained, contentious politics are necessary in order to disrupt this system to require an accommodation in order to re-stabilize the local or national political system. It requires creating more substantive opportunities for social mobility and creativity for the heretofore marginalized. It also requires more social mobility and creativity opportunities for those conservative constituencies that perceive a threat to their status position and are prone to engage in social competition.

A PATH FORWARD

<u>The American Judicial System as Corporatist Epistemic Community</u>

A debate has arisen over whether sustainable development norms have become binding international legal principles on states as articulated by national judiciaries (Alhaji, 2003). International legal norms that have been globally internalized by national judicial systems constitute "*jus cogens*" as interpreted by this global judicial community, i.e., *opinio juris* (Olson, 2000, 23, 24). Sustainable development integrates human rights and development norms with a focus on policy implementation as monitored by the United Nations and other international organizations (Hunt, 2017). American corporatist policy making trends will be path dependent on the basis of legal intervention via the judiciary for licensing and integration partly via the civil rights enforcement system. Observers have noted the exceptionally strong role of the US Supreme Court in promoting the expansion of civil rights and their enforcement in the midst of the societal polarization in response to the new left social movements:

"Today constitutional amendments have become unimaginable, Congress barely legislates, and the Supreme Court manages our social and cultural debates. Our affirmative action system was designed by Lewis Powell and amended by Sandra Day O'Connor. The boundaries of voting rights and free expression are policed by John Roberts. Our abortion laws reflect the preferences of Anthony Kennedy. And now anti-discrimination law and religious liberty protections will reflect what Neil Gorsuch, author of the new decision [after his June 2020 vote to extend civil rights protection to gender minorities]*, thinks is right and good"* (Douthat, 2020, para. 5).

Zuboff (2021, para. 8, 3) warns of national "epistemic chaos" and polarization from social media "surveillance capitalism" business model formulae. They algorithmically reinforce user ingroups' threat perceptions and mobilization via continually refined, targeted and tailored allocation of attention-intensifying affective social digital content. They surveil and accumulate previous user browsing behavior to recommend content channeling for their continuing attention, regardless of veracity or substance. Digital social platforms magnify shared identity ingroup vs. outgroup cleavage formation and intensification proclivities regarding other users. This vast, individual consumer/user-generated, accumulating body of microdata supports sale of targeted advertising, marketing and campaign social media communication placements to buyers. Broader media competition motivations interface with social media incentive patterns to treat public affairs as de facto affective stimulative content, with nationalist affect part of the motivating mix (DeDominicis, 2019). These processes incentivize fabulist, Manichean performance behavior by public political figures.

These same personages are unlikely to submit these same fantasist assertions to courts of law because of the necessity of supporting evidence to avoid punitive judicial responses (Corasaniti, 2021). The judiciary as a public body with enforcement power may be part of a political strategy for countering the polarizing effects of exploiting and magnifying disinformation trends. Section 230 of the federal Communications Decency Act generally removes digital platform responsibility for content posted there (*Scientific American*, 2021). Congressional legislation to modify it would integrate judicial restrictions to help counteract these processes intensifying collective epistemic dissonance.

The judiciary is a vertical epistemic community. According to Mavrot and Sager,

"[W]*e identify a vertical epistemic community as a specific form of epistemic communities. Correspondingly, we combine the notion of epistemic communities, which strongly emphasises their horizontal functioning (how their members interact with one another and which kind of strategies they adopt to pursue their policy objectives), with research on multilevel governance. The latter strongly emphasises the steering aspects of vertical relationships, that is, how superordinate actors aim to influence*

the action of subordinate actors, be it by means of a formal hierarchical structure (hierarchy of laws, formal division of competences, distribution of financial resources) or by exercising informal power. Furthermore, rather than studying how decision-makers are likely to learn from epistemic communities (Haas, 2004), we investigate how vertical epistemic communities are able, in part, to actually bypass decision-makers" [*sic*] (Mavrot and Sager, 2018, 392).

Neo-corporatist, vertical epistemic communities are likely to emerge, relying on scientific consensus on generating public policy prescriptions amidst global health and environmental emergencies. "The strategy of the vertical epistemic community is thus to avoid the political sphere whenever possible, and to confine the policymaking process to the administrative and expert levels. The processes that occur within the epistemic community are less visible, and, thus, less open to attack by external opponents" (Mavrot and Sager, 2018, 403). The functional aim of corporatist integration via vertical epistemic administration is to avoid intensifying societal polarization around public policy issues. Intensifying political polarization associates with destabilization of the liberal regime, to which the regime authorities respond through state intervention in the form of law (Tóth, 2019). The US Supreme Court, despite its precedential, common law judicial tradition that it inherited from the United Kingdom, converges with civil law states by functioning as a constitutional court. The US Supreme Court became the de facto American constitutional tribunal with its establishment of the principle of "judicial review" in 1803 *Marbury v. Madison* (Littlepage, 2014, 60). With increasing American domestic political polarization, the US Supreme Court has become correspondingly active:

"In an era of stark partisan polarization, Chief Justice John G. Roberts Jr. steered the Supreme Court toward the middle, doling out victories to both left and right in the most consequential term in recent memory."

"The term, which ended Thursday, included rulings that will be taught to law students for generations -- on presidential power and on the rights of gay and transgender workers. The court turned back an effort to narrow abortion rights, and it protected young immigrants known as Dreamers."

"It expanded the role of religion in public life, and it cut back on the power of independent agencies. It took steps to prevent chaos when the Electoral College meets after the presidential election. And it handed Native Americans their biggest legal victory in decades."

"A term that included just two or three such decisions would stand out. The term that just ended was a buffet of blockbusters."

"It was also the term in which Chief Justice Roberts emerged as the member of the court at its ideological center, his vote the crucial one in closely divided cases, a role no chief justice has played since 1937. He was in the majority in all but one of the term's 5-to-4 or 5-to-3 decisions."

"But the chief justice was not alone in guiding the court toward the center: The percentage of 5-to-4 rulings dropped to a little more than 20, down from an average of 30 in the previous two terms."

"Several major decisions were decided by 7-to-2 votes, including ones on subpoenas for President Trump's financial records and the rights of religious employers. In some ways, the most prominent losers this term were the members of the court on its far right (Justices Clarence Thomas and Samuel A. Alito Jr.) and far left (Justices Ruth Bader Ginsburg and Sonia Sotomayor). They were the least likely to be in the majority in divided cases" (Liptak, 7/2020, para. 2-8).

"Comparative legal scholars have documented convergence over time between some aspects of common-law and civil-law procedures (Merryman, Perez-Perdomo [1969] 2007)" […] (Shughart, 2018, 224). The

US Supreme Court has accelerated its convergence since FDR's New Deal, accentuating application of statute-driven law (Conde and Greve, 2019). Debate surrounds the degree to which statutory administrative law in a liberal democratic state may allocate executive regulatory rulemaking to agencies subject to judicial and legislative restraint (Candeub, 2018). "An example of requiring the government to follow administrative law principles was Chief Justice Roberts's majority opinion in a 5-to-4 decision rejecting the Trump administration's justifications for trying to shut down a program protecting the Dreamers" [a class of undocumented US residents (BD)] (Liptak, 7/2020, para. 30-33).

Entrikin (2019, 357-60) argues that the American common law tradition of judge-made law based on judicial precedent is "dead." Entrikin calls for the American legal academy to "stop pretending that we live and work in a common law legal system driven by judge-made law" when in reality has long been statute-driven. "[O]ver the last century, the corpus of American law has expanded to encompass not only statutes but also court rules, state and federal administrative regulations, executive orders, international treaties, supranational conventions, common market legislation and interstate compacts" all constraining and overdetermining the individual judicial interpretations of law. American law is statute-driven; even when judges strike down statutes, they are claiming that the provision is inconsistent with higher legislation; "judge-made law is subordinate law" (Entrikin, 2019, 1, quoting Watson, 1984, 80).

The de facto US functional shift to a statutory law system stems from the development of the modern state congruently with the rise of mass political participation and national identity. The national standardization of statewide institutions reflects the concomitant growth in awareness of interdependency. This interdependency has its legal reflection in the awareness of the "increasingly complex and interconnected statutory domain" (Entrikin, 2019, 360). Citing various legal scholars, Entrikin argues that "[c]odification is the most commonly cited feature characteristic of the civil law tradition. Speaking generally, codification is nothing more than "a method for the formulation of written law as opposed to unwritten [judge-made] law." Further, codification is not unique to the civil law tradition; common law nations and states have increasingly made use of the method as well" (Entrikin, 2019, 437, quoting Stone 1955).

To change administrative agency environmental regulations, the Administrative Procedure Act requires scientific evidence be presented to justify the changes. Executive branch interpretation of law regulatory modifications may not be "arbitrary" and "capricious" (Sanger-Katz, 2019, para. 9). Specifically, the legislative statute states in section 10, of the Administrative Procedure Act of 1946, "Judicial Review," paragraph e:

"(e) SCOPE OF REVIEW.-So far as necessary to decision and where presented the reviewing court shall decide all relevant questions of law, interpret constitutional and statutory provisions, and determine the meaning or applicability of the terms of any agency action. It shall (A) compel agency action unlawfully withheld or unreasonably delayed; and (B) hold unlawful and set aside agency action, findings, and conclusions found to be (1) <u>arbitrary, capricious, an abuse of discretion</u>, or otherwise not in accordance with law; (2) contrary to statutory jurisdiction, authority, or limitations, or short of statutory right; (4) without observance of procedure required by law; (5) unsupported by substantial evidence in any case subject to the requirements of sections 7 and 8 or otherwise reviewed on the record of an agency hearing provided by statute; or (6) <u>unwarranted by the facts to the extent that the facts are subject to trial de novo by the reviewing court. In making the foregoing determinations the court shall review the whole record or such portions thereof as may be cited by any party, and due account shall be taken of the rule of prejudicial error</u>" [emphasis added] (uslaw.link n.d.).

Additionally, the 1970 National Environment Policy Act statute "requires that federal-agency decisions that could have an environmental impact on the nation's air, water, or pristine wildlife habitats must include a scientific analysis detailing the effects" (Davenport, 2018, para. 18). Specifically, the text of the legislation states, *"SEC. 102. The Congress authorizes and directs that, to the fullest Administration. extent possible: (1) the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this Act, and (2) all agencies of the Federal Government shall—"*

"(A) utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on man's environment;" […] [*sic*] [emphasis added] (US Government Publishing Office, 1970).

US Neo-corporatism amidst the Covid-19 Pandemic

In code law, i.e., corporatist, legal framework societies, societal constituencies are more prone to attitudinally acknowledge the propriety of state authority leadership (Lipset, 1997). It facilitates "concertation" of societal interests for consensus building in otherwise polarized polities (Morlino, 2013, 354). They are comparatively more prone to defer to state official attempts at corporatist concertation of societal interests. "[T]he penchant of the Council of Europe on defining judicial independence in a corporatist key is well-known" (Iancu, 2019, 206).

As noted above, the evolution of the US de facto legal norms system arguably reflects polity tendencies towards state regulatory intervention in response to societal political polarization. McCarthy (2019) portrays a number of large pharmaceutical companies and their collaborators as nefarious actors that should be charged under the Racketeering Influenced and Corrupt Organizations Act of 1970 (RICO). He covers a number of public scandals and practices on the part of both corporations and collusive government officials, as well as regulatory and enforcement agencies that contributed to the opioid addiction epidemic. Global media attention is now focused on these pharmaceutical companies in the race to produce and distribute SARS-CoV-2 vaccines. This global crisis may allow these pharmaceutical companies, firstly, to upgrade their public reputations by creating, manufacturing and distributing the necessary vast dosage quantities of these vaccines (Grady, Goodnough and Weiland, 2020, Forsythe and Bogdanich, 2021). Secondly, they have been de facto designated as critical national security organizational infrastructure, like the large defense contractors, e.g., Boeing, Lockheed, and others, that must and will have a privileged, special relationship with the US government for national security.

The US response to economic crisis consequences of the Covid-19 pandemic has witnessed an increase in the US government providing business subsidies on a scale heretofore not witnessed. US airline companies and aerospace manufacturers with a vast network of part suppliers, e.g., Boeing, are among the targets for these subsides. President Trump signed the Coronavirus Aid, Relief, and Economic Security (CARES) Act on March 27, 2020, with one observer noting vociferously that CARES is economic relief, not a stimulus (*Forbes*, 2020). It included $25 billion in loans to airline corporations and $8 billion as grants and loans to air cargo delivery companies to incentivize them to furlough their employees rather than restructure by declaring bankruptcy (Rappeport, 2020). The CARES act explicitly highlights this intervention as necessary to support the corporate institutional infrastructure for US national security. In order to help ensure repayment of loans and to oversee corporate governance more generally, the US government considered acquiring shareholdings in these corporate entities. Airline and air cargo delivery company senior administrations have resisted this potential dirct government intervention in their policy making authority.

The April 14, 2020 *New York Times* continued that some US corporate leaders have reacted skeptically to scenarios in which the government provides these financial subsidies in return for corporate shares (Eavis and Phillips, 2020). They presumably disapprove of US government agencies limiting their policy decisional latitude. Government representatives would justify and legitimate this intervention as exercising its fiduciary responsibility to the American public. The US electorate's attitudinal predisposition is to react negatively to so-called corporate bailouts; US officials tend to respond in terms of populist terms of protecting employment (Eavis, Chokshi and Gelles, 2020). Shareholders dislike the prospect of the US government receiving corporate shares in return for financial subsidies leading to a reduction in their ownership share of the company (Eavis and Phillips, 2020). They would have less influence capability over corporate policy making. The March 27, 2020 subsidy package included $60 billion for this industry. Airline lobbying associations successfully prevented including requirements that they devote resources to overhaul their computer systems to collect personal information for all passengers (Kitroeff and Silver-Greenberg, 2020).

In the US case, this US government primacy is acknowledged through the extensive use of the Korean War-era Defense Production Act. Its language has been inserted into thousands of contracts with private sector contractors supplying the national security and emergency response bureaucracies over decades. “The Pentagon has long been aggressive in its use of the law, inserting language from the wartime act into contracts to ensure delivery of products by a specific date” (Kanno-Youngs and Swanson, 2020, para. 16). In the event of a product or service delivery time conflict, the US government buyer has priority. Again, it highlights the US polity’s emphasis on the national security and emergency state for the corporate concertation of societal interests. “The Defense Department estimates that it has used the law's powers 300,000 times a year. The Department of Homeland Security -- including its subsidiary, FEMA -- placed more than 1,000 so-called rated orders in 2018, often for hurricane and other disaster response and recovery efforts, according to a report submitted to Congress in 2019 by a committee of federal agencies formed to plan for the effective use of the law” (Kanno-Youngs and Swanson, 2020, para. 13-14). The DPA does not allow US authorities “to assert complete control over a company”; it gives the federal government priority on receipt of products and a rarely used provision allows control over a company’s product distribution (Kanno-Youngs and Swanson, 2020, para. 15).

The US government targeting 3M to seize its global output of respirator masks show the coercive potential of US government corporatist responses to the associated crises of the Covid-19 pandemic. President Trump announced the appointment of Peter Navarro as his Defense Production Act Policy Coordinator on March 27, 2020 (“Remarks by President Trump,” 2020). Navarro’s “vast expansion of power” came after serving as Trump’s protectionist senior trade adviser advocating the revocation of existing trade liberalization agreements as well as the imposition of tariffs. The *New York Times* reported on April 7, 2020, that on April 3 the Trump administration gave Navarro and other officials authority to prevent 3M and other companies from fulfilling overseas orders for medical supplies. Navarro also “has been working to shore up the supply chain for hydroxychloroquine, an anti-malarial drug Mr. Trump has promoted for treating the [Covid-19] virus, despite little proof of its efficacy” (Swanson, 2020, para. 8). Trump ally interviewees in this report view the current extended intense crisis as providing an opportunity for shifting the US manufacturing base in the direction of autarky. “"What you are seeing is just the beginning," Daniel DiMicco, a former trade adviser to Mr. Trump who leads the Coalition for a Prosperous America, said of Mr. Navarro using the law to reshore American manufacturing. "It's time for our multinationals to get on board"” (Swanson, 2020, para. 10).

In the same report, other interviewees expressed fear that the attempted move to autarky would be part of shift to US isolationism in foreign affairs: Daniel Price, a former top trade adviser to President George W. Bush, warned that Mr. Navarro could have used his newfound power in more destabilizing ways. “’Frankly, his appointment poses the risk that D.P.A. [Defense Production Act] authorities will be used opportunistically to pursue an isolationist Fortress America agenda that long preceded the present crisis and that would further divide us from allies,’ he said. Foreign leaders have already expressed concern about America's moves to commandeer 3M's global production” (Swanson, 2020, para. 34-36). Initial Biden administration actions belie Trump-era indications that the US intends to withdraw its institutionalized external influence channels in favor of a strategy reminiscent of prewar Fortress America.

In response to a US Congressional inquiry, the US Defense department requested a post-pandemic increase in US military spending. Congressmembers forecast Chinese expansion against US allies and interests

(Barnes, 2020). Indicators of a shift in favor of a Fortress American withdrawal would be whether or not the US forsakes its position in Afghanistan and Iraq. If the Americans do withdraw from Afghanistan and the Kabul government collapses, the US is likely to compensate for the humiliation by striking a third actor, e.g., Iran. This militarist behavior pattern has precedent; the US invaded Grenada two days after the October 23, 1983 bombing of the US marine barracks in Beirut that led to a rapid US withdrawal. The US also attacked the Khmer Rouge in May 1975 for seizing the Mayaguez merchant vessel less than a month after the collapse of its client regime in Cambodia.

American polarization around racial divisions inhibits the neo-corporatist development of welfare policies. Some (Adamson, 2019, 50-51, referencing Berezin, 2009, 8) argue that the rise of racial polarization and right-wing populism in the West is a concomitant of neoliberalism. That is, economic libertarianism and market-based passive public policy undermines the "welfare state." The remedy for societal polarization includes the resurgence of the welfare state. It requires a "Scandinavian model of social citizenship" that is accommodative of corporate investment incentives while maintaining social solidarity (Balorda, 2019, 137). Sadeh, Radu, Feniser and Borsa (2021, 4-5) comparatively highlight German "corporatist" "Ordoliberalism," i.e., a "social market economy" with the authorities allocating national resources oriented towards sustainable development.

Social competition results from challenges to the political hierarchical status quo. Social creativity is more likely to be the response if substantive benefits result from it in the form of achievement of status. Status enhancement can emerge from validation of self at a supernational level beyond the WASP core culture-based nation state. For example, Pavone (2019, 5-6) highlights how legal "strategic entrepreneurs," i.e., two "Eurolawyers," liberalized labor laws at the Port of Genoa by utilizing the EU legal regime's "transformative potential" with its for-profit and civil society allies. The EU's leading example of sustainable integration promotes "frame diffusion" among state authorities developing superordinate cooperation institutions (Lenz, 2018, 31-32). Globalization exploits national vested interests to secure additional benefits by promoting neo-functional spillover with supranational regime institutionalization as one of its outcomes. These private- and public-sector vested interests can become coalitional allies for this institutionalization process. A supportive trend policy would include promotion of international political economic regimes with nascent institutional dispute resolution mechanisms protecting human rights. These rights include sustainable development.

For example, the G20 has emerged as a "transgovernmental regulatory network" (TRN) that purports to offer greater political flexibility in international policy coordination (Cho and Kelly, 2017, 492). This paper suggests that a drawback of the more informal TRN approach forsakes the development of an international legal architectural framework around which global civil society may coalesce and form. The existence of such formal legal architectures encourages the formation of supraordinate attitudes among the global attentive public. Cho and Kelly (2017, 562) conclude that

"First, the G20 has in fact been successful due to soft institutionalization. Yet with this hard institutionalization and consequent augmented bureaucratization, the G20 may lose its characteristic agility in policy response. Second, this new mega-bureaucracy, which may only parallel the UN in its magnitude, may invite a familiar foreboding of a World Government among sovereigntists. Such foreboding may cost the G20 some legitimacy, regardless of its merits."

The emergence of nationalist resistance to perceived national sovereignty autonomy is inevitable. Formal, accessible institutional legal architectures, e.g., the global UN and regional EU systems, assist the creation and mobilization of supportive, allied transnational constituency groups and coalitions.

American polarization around racial divisions challenges the neo-corporatist development of the welfare state. Incorporation of sustainable development and human rights protections, e.g., autonomous trade unionization as a right, can motivate the coalitional alliance with the non-profit, global civil society organizations. It can especially play this role insofar as international diaspora identities have a potential for mobilization among traditionally marginalized groups. Effective institutionalization of neo-functional spillover will promote the diversification of the state, thereby to make individual social mobility more feasible for individuals within these marginalized groups. It can coopt these heretofore segregated citizens, increasing the relevance of utilitarian economic and participation incorporation becoming more prominent. News report vignettes provide family case scenarios whereby this multilevel process is evident at the individual level. For example, in the midst of populist retail investors utilizing social media and investment software applications to bid up the price of "GameStop" shares,

"Jaydyn Carr of San Antonio made $3,200 on shares from GameStop this week that his mother bought him in 2019 for about $60.

"As amateur investors banded together this week to squeeze Wall Street hedge funds by sending GameStop's stock prices to dizzying heights, some novice traders, like 10-year-old Jaydyn Carr of San Antonio, have seen their long-term investments pay off."

"In December 2019, Jaydyn, then 8, was buying discounted games at GameStop and wishing for an Xbox One. Spying a way to use her son's enthusiasm for video games to teach him about investing, <u>Jaydyn's mother, Nina Carr, decided to invest in 10 shares of GameStop at $6.19 a share for a Kwanzaa gift</u>."

"<u>Ms. Carr handed her son a certificate she created from an online template to explain to him that he was the owner of a tiny part of GameStop. She told him the gift was in keeping with the spirit of ujamaa, or cooperative economics, one of the seven principles of Kwanzaa</u>" [*sic*] [emphasis added] (Morales, 2021, para. 1-4).

The report notes that Ms. Carr and her son are African American, and that she is single after her partner, "an Army combat medic" and the son's father, "died in 2014 from combat-related complications" (Ibid. para. 13). Transnational diaspora political activism can support societal norm diversification that in turn provides broader social space for dynamic, mutually reinforcing social creativity and mobility opportunities. Neo-corporatist policy strategy effectiveness encourages integration and assimilation for heretofore marginalized groups and individuals in an evolving American societal polity.

CONCLUDING COMMENTS

The immediate post-Vietnam War era witnessed the acceleration of the integration of the American national security establishment with the American welfare state. In response to American domestic unrest including among communities of color, the US government abolished mandatory military service and moved to a professional military in 1973. The social mobility opportunities available to individual service members expanded along with the material benefits offered in return for military service to encourage voluntary recruitment. The US military had played a leading institutional role in desegregating American institutions with President Truman's 1948 executive order 9981 mandating military integration. The transition to an all-volunteer military facilitated the cooptation of aspiring racial minority elites, functionally weakening trends of intensifying minority political militancy publicly evident since the 1960s. They were part of government and private sector policies that tend to crop these progressive civil rights social movements of their leadership. "[US Supreme Court] Justice [Clarence] Thomas grew up impoverished in a Gullah-speaking community in Georgia and spent his youth as a black nationalist radical in the mold of Malcolm X before reluctantly accepting a job with a Republican attorney general in Missouri, the only job offer he was given, he explains […] He voted for Ronald Reagan in 1980, in what he called "a giant step for a black man"" [*sic*] (Casey, 2020, para. 25).

The upshot of globalization is that perceived threats become stereotyped as indirect and covert and undermining idealized intra-societal relations. The Black Lives Matter police brutality demonstrations following the May 2020 killing of George Floyd interacting with the Covid-19 directed public attention to structural racism in the US. Some experts declared racism to be a "public health crisis" (Stolberg, 2020, para. 28). White nationalists, as with nationalism everywhere, tend towards stereotyping of the dynamic environment. They functionally, self-servingly seek a state target as embodying and originating the source of the disruption, e.g., the Trump administration's scapegoating of China. This tendency recalls Stalin's targeting the British and the US as embodying the perceived imperial, conspiratorial threat from capitalism (Cottam and Cottam, 2001). Social mobility opportunities amidst American global influence include national security institutional infrastructure. Creating new concrete substantive social mobility and creativity opportunities by elaborating supernational institutions to satisfy status needs is part of a prescriptive response for regime stability. Authorities provide social creativity options for core populists as well. They are dangerous insofar as they tend to be more readily feasible by allying against and scapegoating an enemy, e.g., China, Islam, Jews, LGBTQ rights and others.

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ACKNOWLEDGMENTS

This article was written with the support of the 2020 Catholic University of Korea Research Fund. The author would like to thank two anonymous reviewers for their insightful critiques and suggestions as well as the journal editor for editorial oversight. Any mistakes and omissions are solely the responsibility of the author.

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Review of Business & Finance Studies
Vol. 12, No. 1, 2021, pp. 31-39
ISSN: 2150-3338 (print)
ISSN: 2156-8081 (online)

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A LINEAR PROGRAMMING OPTIMIZATION MODEL FOR A DIET PROGRAM

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ABSTRACT

The global obesity problem has increased over the years. Weight control is a concern for the third decade generation as social media and commercials play major role in demonstrating beauty standards. This study proposes a diet program, subject to the calories needed for daily consumption, the budget for the diet, and the healthiest distribution for meals in a day. A Linear Programming modelling is used to identify the optimal diet program with defined standard limits. These standards are translated to become the constraints of the Linear Programming model and QM software program to find the solution. The solution provides a diet choice for consumers under study. The diet provides a tool for businesses to help their employees remain healthy and productive.

JEL: C60, C61

KEYWORDS: Optimal, Diet, Linear Programming

INTRODUCTION

The third decade of life is among the busiest times of the human life. Life demands energy at work and taking care of the family. It can be hard to keep up with the demands. Thus, people tend to take the easiest option with their food choices, whether eating fast food, consuming more food than needed, or eating extra snacks between meals. These choices often lead to a serious problem with weight gain that implies a whole new set of health problems including diabetes, high blood pressure and cardiac problems. Several researchers indicate that both overweight and obesity are common in Saudi Arabia in both genders.

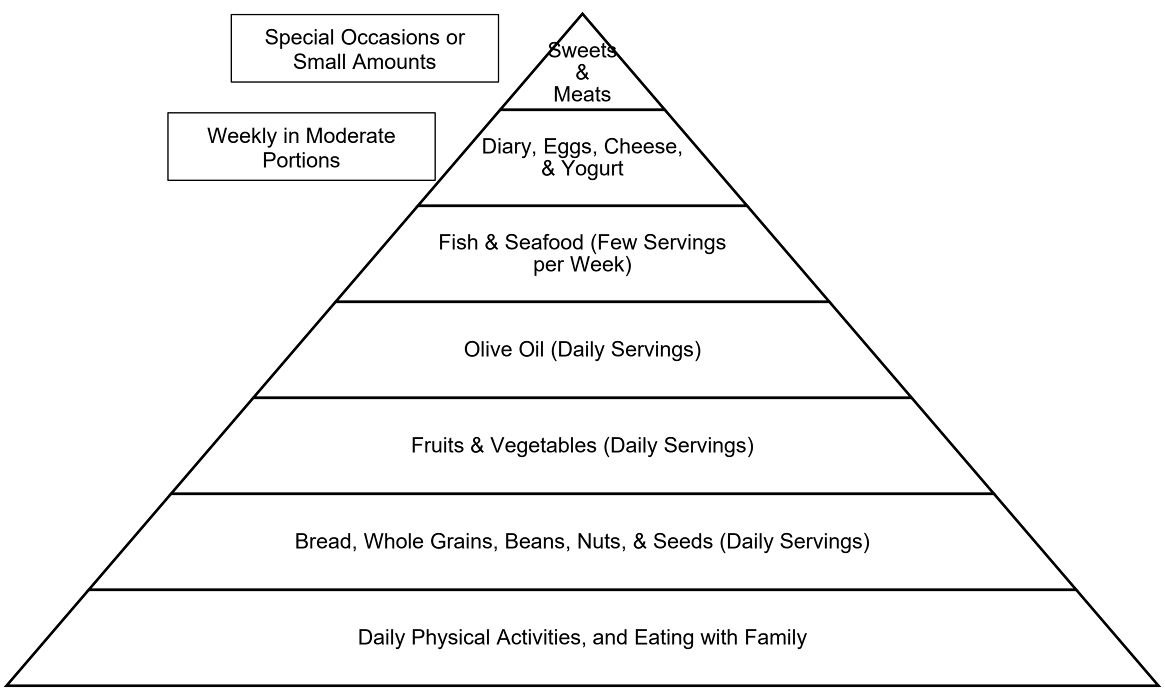
Overweight individuals tend to be males while obesity is more common in women. One of researcher found that 36.9% of the population is overweight and 35.5% are obese (Alqarni, 2016). In some areas of the country, female obesity reached 71% male obesity was 56.2% (Ahmed, Ginawi, Elasbali, Ashankyty, Al-hazimi, 2014). In Jeddah, Saudi Arabia, the overweight and obesity percentages are 29.8% and 18.6%, respectively (Baig, Gazzaz, Gari, Attallah, Al Jedaani, Mesawa, Al Hazmi, 2015) This research analyzes the problem and makes recommendations people in their third decade of age in Jeddah city, Saudi Arabia. The research started with the literature review and then gathers additional information about the problem. Next, I provide a list of possible food choices with their calories and prices. After that, the constraints for the equation are identified leading to formulating a linear programming model based on the data. Finally, optimal solution is provided by solving the equation using the QM program, which will gives the minimum price for breakfast, lunch, and dinner individually for the suggested food types. The optimization model is suggested for business level strategy that pushes business owners in food industry to obtain more market shares.

LITERATURE REVIEW

A good diet is essential for people to keep fit and healthy. Bottled or fast food is possible reason for early ageing and may affect the immune system of human beings. Choosing a balanced diet might be challenging as it constitutes numerous ingredients, which are needed for human growth. Therefore, the diet decision is complex if it is related to cost constraints.

The constituents considered are Protein, Vitamin E, Iron and Calcium, which can be facilely available in eggs, wheat, black and brown beans, and milk (Patil, Kasturi, 2016). A number of diets have been proposed. Thee include Sea food diets, the macrobiotic diet, and the Mediterranean diet. The Mediterranean diet in particular can improve the life of Crohn's disease (CD) patient or reduce the activity of the Crohn's disease. (Papada, Amerikanou, Forbes, Kaliora, 2019). The Mediterranean diet depends on old habits of eating since the 1960s. The diet is common among people from countries that surround the Mediterranean Sea. It is motivated b consuming of fresh, seasonal, and local foods. The Mediterranean diet is not a single specific diet, but is a general, expansive and food-based diet that is characterized by local and cultural differences throughout the Mediterranean Sea area (Willett, Sacks, Trichopoulou, Drescher, Ferro-Luzzi, Helsing, Trichopoulos, 1995). Studies show the guidelines of this diet are only catching up to individuals and their actual behavior (Willett, 2006). The Mediterranean diet has been studied and shows a reduction in mortality rates (Trichopoulou, Costacou, Bamia, Trichopoulos, 2003). Other research demonstrates a significant reduction on mortality risks by reducing the incidence of cardiovascular, cancer, Parkinson's, and Alzheimer's diseases (Sofi, Cesari, Abbate, Gensini, Casini, 2008). Figure 1 shows the tringle of Mediterranean diet, which gives an idea of the wide choices that can be consumed.

Figure 1: Mediterranean Diet



The Mediterranean diet tringle provides a nutrition guide. This diet includes a wide choice of food that can be consumed. The figure summarizes the Mediterranean Diet pattern of eating, suggesting the types and frequency of foods that should be consumed every day.

One study shows the Mediterranean diet can protect against Hepatocellular carcinoma. The results also stated that adhering to the Mediterranean diet could help the conditions of patients with hepatitis viruses. (Turati, Trichopoulos, Polesel, Bravi, Rossi, Talamini, Franceschi, Montella, Trichopoulou, Vecchia, Lagiou, 2014). Another study displays that, in an insulin-resistant population with non-alcoholic fatty liver disease, the Mediterranean diet can reduce liver steatosis and improves insulin sensitivity. This occurs even without weight loss (Ryan, Itsiopoulos, Thodis, Ward, Trost, Hofferberth, O'Dea, Desmond, Johnson, Wilson, 2013). In addition, The Mediterranean diet can reduce both coronary atherosclerosis and thrombosis (Lorgeril, Salen, 2011).

A common way to lose fat and improve mood and sleeping habits is through exercise (Mgordon, Heath, Holmes, Christy, 2000). A recommended way to burn fat is to do cardio exercises that increases the heart rate such as running, swimming or any other cardio exercises. However, physical exercise alone could result in worse body shape for some women (Prichard, Tiggemann, 2008). "According to the American College of Sports Medicine (ACSM)" the recommended exercise time is 150 to 250 minutes per week to burn fat (Donnelly, Blair, Jakicic, Manore, Rankin, Smith, 2009). The suggested heart rate for burning fat for third decade is between 126-150 beats per minutes (Carey, 2009).

Many applications can be used to optimize solutions such as Delivery and Storage system, or Queuing theory, which reduces cost, or reduces waiting time and increase the speed of customer service, respectively. Other applications are also available such as Scheduling and Facility location (Fathi, Khakifirooz, 2019). In this research, an optimal solution of choices is obtained through operational research methods of using a linear programming equation solved by QM program. QM software provides solutions based on Quantitative methods, mathematical analysis for Operations Management, or Management Science. It features calculations for a number of methods including Linear Programming, which reduces cost and saves time and effort (Richardson, 2019, Singla, 2016). Linear programming is a mathematical equation that helps the user identify the best solution possible from a range of solutions by identifying variables, data, target setting of the study and constraints, and by setting the maximizing or minimizing target (Júnior, Yanasse, Morabito, Junqueira, 2019).

Operations research problems contain two main objective functions which are to maximize or minimize an objective function in the presence of constraints. For example, as a minimization problem the objective function might be a desire to minimize the time spent. At the same time a constraint might be that no negative time is spent. Similarly, most people want to minimize spending money on food. But at the same time, maintaining a certain level of nutrition. For instance, the US national institute for health advises certain consumption of some minimum daily nutrition for males between the age of 19-30 years, such as 3.7 liters of water, 90 milligrams of vitamin C, and 1 gram of calcium per day. Operations research has been used to find the optimum solution that minimize the cost with maintaining the required nutrition constraints. (J2kun, 2014a). Applying operations research for finding a suitable weight loss diet in third decade of life and identifying an optimal weight loss solution is desirable.

We keep in mind that following extreme diets which contains a limited number of calories, could lead to a lack of energy and strength, missing some essential nutrition and vitamins, as well as a lot of mood changes. In addition, when the body faces a lack of calories and energy declines, metabolism will naturally slow to save energy. Moreover, a extreme diet may lack the appropriate digestive needs of water and fiber, which come from several kinds of foods like grains, vegetables, and fruits. Thus, a diet lacking certain food groups could lead to decelerated digestion (U.S. Department of Agriculture and U.S. Department of Health and Human Services, 2010).

THE METHODOLOGY

To lose weight during a diet, the number of the consumed calories should be monitored. The type of food and the consumed amount should be balanced. Moreover, sometime healthy food can be expensive. As a result, cost was considered a constraint. Therefore, a variation of food was chosen with multiple flavors to eliminate the consumer's bored feeling and assure a more enjoyable continuation with the diet (Schumacher, 2018). Table 1 shows a list of food choices the consumer can choose from is provided.

Table 1: Ingredients List

Ingredients List	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
#	Oats	Yogurt	Chicken breast	Tuna	Cheese slice	Brown bread	Mix vegetables	Milk	Peanut butter

The table shows a list of food choices the consumer can choose from. These meals have been chosen based on availability and that they can be easily found. In the study, the amount and frequency will be calculated. Ingredients 1,2,3 are for the breakfast, Ingredients 4,5,6 are for the lunch, and ingredients 7,8,9 are for the dinner.

The information in Table 2 is based on a nutritional expert's view about the best amount of protein, carbohydrate, and fat for males between 20-30 years old planning to losing weight. Consumer's must intake 1500 calories daily divided between three main categories of food (Binks, 2019).

Table 2: The Diet Meals

Meals	**Carbohydrate (g)**	**Protein (g)**	**Fat (g)**	**Calories**
Breakfast	56.25	56.25	5.5	500
Lunch	78.75	70	11.6	700
Dinner	18.75	48.75	3.3	300
Daily/ Grams	153.75	175	20.4	1500

This table shows the natural carbohydrate, protein, fat, and calories for all three different meals. These are based on a nutrition experts view of the best amount of protein, carbohydrate, and fat for males between 20-30 years old planning to losing weight with a total consumption of 1500 calories daily divided between three mails.

Table 3 shows the list of food choices divided into meal categories: breakfast, lunch and dinner. It also shows the nutrition values and the price for each kind of food. This table shows a list of healthy food that helps in losing weight with lower cost. The prices are in Saudi Riyals (SAR1 = US$ 0.27 approximately) and were taken from Al-Danube supermarket in October/2019 (Al Danube, 2019). Each meal should contain three items. For instance, breakfast will include brown bread, peanut butter, and milk. Lunch will include Oats, Yogurt, and Chicken breast. Finally, dinner includes tuna, cheese slice and mixed vegetables.

Table 3 Meals and Price

#		**Food/100g**	**Carbohydrate**	**Protein**	**Fat**	**Calories**	**Price (SAR)**
1	X_1	Brown bread	40.1	9.8	2.5	222.1	1/100g
2	X_2	Peanut butter	8	7	8	132	3/100g
3	X_3	Milk	4.4	3.2	1.1	41.5	1/100ml
4	X_4	Oats	58.1	12.1	8.4	356.4	1.5/100g
5	X_5	Yogurt	7	4.6	1.1	56.3	0.70/100g
6	X_6	Chicken breast	0	33	1.5	145.5	2/100g
7	X_7	Tuna	0	29	6.5	174.5	3/100g
8	X_8	Cheese slice	9	21	1.5	133.5	4.5/100g
9	X_9	Mix vegetables	11.9	9.46	0.1	86.34	0.8/100g
Totals			138.8	129.16	30.7	1348.14	

Table 3 shows the list of food choices divided in the meal categories: breakfast, lunch, and dinner, and includes nutrition values and the price for each kind of food. The prices are in Saudi Riyals and are taken from Al-Danub supermarket. The three meals are breakfast (brown bread, peanut butter, milk), Lunch (Oats, Yogurt, Chicken breast), and dinner (tuna, cheese slice, mix vegetables)

RESULTS

In this step, the meals have been divided into breakfast, lunch and dinner. To determine the best way or the optimal way to lose weight, linear programming was used to find the optimal solution. There are many methods to solve this problem such as graphical and simplex methods. The simplex method was used here. Finally, the optimal diet solutions will be found by using QM software program.

Formulation and Optimal Solution

1) Formulation of Breakfast:

Objective Function

$$Minimize\ Z = X_1 + 3X_2 + X_3 \tag{1}$$

Subject To

$$40.1X_1 + 8X_2 + 4.4X_3 \geq 56.25 \tag{2}$$

$$9.8X_1 + 7X_2 + 3.2X_3 \geq 56.25 \tag{3}$$

$$2.5X_1 + 8X_2 + 1.1X_3 \geq 5.5 \tag{4}$$

$$X_1,\ X_2,\ X_3 \geq 0 \tag{5}$$

Table 4 shows, the process of solving the minimization equation for the breakfast meal with the considered constraint by the QM program, and the optimal solution for each 100g in breakfast is SAR 5.74, when eating brown bread, peanut butter, and milk.

Table 4: Solutions of Breakfast

Solution	X_1	X_2	X_3		RHS	Dual
Minimize	1	3	1			
Constraint 1	40.1	8	4.4	> =	56.25	0
Constraint 2	9.8	7	3.2	> =	56.25	-1
Constraint 3	2.5	8	1.1	> =	5.5	0
Solution	5.74	0	0		5.74	

Table 4 shows the process of solving the minimization equation for the breakfast meal with the considered constraint by the QM program. It shows that the minimum price for the breakfast is SAR5.74 when eating brown bread, peanut butter, and milk. These meal items have been chosen for the breakfast for their availability and price in the region of the test (Saudi Arabia). Constraint 1 contains carbohydrates, constrain 2 contains protein, and constrain 3 contains fat.

2) Formulation of Lunch:

Objective Function

$$Minimize\ Z = 1.5X_4 + 0.7X_5 + 2X_6 \tag{6}$$

Subject To

$$58.1X_4 + 7X_5 + 0X_6 \geq 78.75 \tag{7}$$

$$12.1X_4 + 4.6X_5 + 33X_6 \geq 70 \tag{8}$$

$$8.4X_4 + 1.1X_5 + 1.5X_6 \geq 11.1 \quad (9)$$

$$X_4,\ X_5,\ X_6 \geq 0 \quad (10)$$

As shown in Table 5 below, the minimization equation for the lunch meal with the given constraints indicate an optimal solution for lunch when eating 100g of oats, yogurt and chicken breast equals SAR 5.28.

Table 5: Solutions of Lunch

SOLUTION	X_4	X_5	X_6		RHS	DUAL
Minimize	1.5	0.7	2			
Constraint 1	58.1	7	0	> =	78.75	-0.01
Constraint 2	12.1	4.6	33	> =	70	-0.06
Constraint 3	8.4	1.1	1.5	> =	11.1	0
Solution	1.36	0	1.62		5.28	

Table 5 shows, the minimization equation for the lunch meal with the given constraints indicate an optimal solution for lunch when eating 100g of oats, yogurt and chicken breast equal to SAR 5.28. These meal items have been chosen for lunch because of their availability and price in the region of the test (Saudi Arabia). Constraint 1 contains carbohydrates, constrain 2 contains protein, and constrain 3 contains fat.

3) Formulation of Dinner:

Objective Function

$$Minimize\ Z = 3X_7 + 4.5X_8 + 0.8X_9 \quad (11)$$

Subject To

$$0X_7 + 9X_8 + 11.9X_9 \geq 18.75 \quad (12)$$
$$29X_7 + 21X_8 + 9.46X_9 \geq 48.75 \quad (13)$$

$$6.5X_7 + 1.5X_8 + 0.1X_9 \geq 3.3 \quad (14)$$

$$X_7,\ X_8,\ X_9 \geq 0 \quad (15)$$

Finally, Table 6 shows the optimal solution after the data was processed by the QM program for the minimization equation for the dinner meal when eating 100g of tuna, cheese slice and mix vegetables. The optimal solution is SAR 4.37.

Table 6: Solutions of Dinner

SOLUTION	X_7	X_8	X_9		RHS	DUAL
Minimize	3	4.5	0.8			
Constraint 1	0	9	11.9	> =	18.75	0
Constraint 2	29	21	9.46	> =	48.75	-0.08
Constraint 3	6.5	1.5	0.1	> =	3.3	-0.09
Solution	0.45	0	3.77		4.37	

Table 6 shows the optimal solution after data was processed by the QM program. I use a minimization equation for the dinner meal when eating 100g of tuna, cheese slice and mix vegetables. The optimal solution equals SAR 4.37. These meal items have been chosen for dinner for their availability and price in the test region (Saudi Arabia). Constraint 1 contains carbohydrates, constrain 2 contains protein, and constrain 3 contains fat.

CONCLUSION

This study proposes a weight loss diet plan. Setting a diet plan is essential to help consumers following the diet plan to be aware of the concept of the diet as well as being realistic, serious, and enthusiastic. People follow a diet plan to either loose or gain weight. This study sets up a plan for the essential daily calories needed for losing weight with the consideration of lower food cost with targeting people in their third decade of life in Jeddah, Saudi Arabia. To the best of the author's knowledge, there is no study that has been published with the targeted consumers stated. The approach used in this study was applying linear programming method on the data to find the optimal solution for the process, the optimal solution was found using QM software. The optimal solution for breakfast is SAR 5.74 for every 100g. Whereas the optimal solution for lunch is SAR 5.28 for every 100g, and optimal solution for the dinner is SAR 4.37 for every 100g. The recommendations are for consumers living in Jeddah, Saudi Arabia in their third decade of age and want to follow a diet plan for losing weight. Farther research could include other age groups as well as other areas of the country. Further research might also examine the effectiveness of the diet on the individual's health and weight loss achievement. The suggested optimization model is highly recommended for businesses (e.g., food market) to customize diet meals for customers with respect to cost. As a business level strategy, this optimization tool fetched worthy repetition for the market store. However, I recommend that any diet plan be initiated only in consultation with an appropriate medical doctor and should consider any special health circumstances of the individual.

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ACKNOWLEDGMENT

The author acknowledges the helpful comments and time given of Dr. Ahmed Bakhsh, Chairmen of the Industrial Engineering Department at King AbdulAziz University, Jeddah, Saudi Arabia.

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Review of Business & Finance Studies
Vol. 12, No. 1, 2021, pp. 41-50
ISSN: 2150-3338 (print)
ISSN: 2156-8081 (online)

www.theIBFR.com

THE STATE OF PRIVATE GREEK ENTERPRISES DURING THE 1960-2010 PERIOD

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ABSTRACT

This article examines the development of private Greek enterprises from 1960 to 2010 and detected that little progress was made during the period. This lack of progress is due to limited management and organizational knowledge by owners-managers of such organizations and the inability of the enterprises to grow internally and externally. I propose that both human and non-human areas of firms need to undergo concurrent development under the auspices of an industrialized socio-economics system to move forward in a positive way.

JEL: M16, M20

KEYWORDS: Greece Owners-Managers Private Enterprises, Economies of Scale Post-Fordism De-industrialization Organizational Development, Social Mobility Static Status Quo

INTRODUCTION

The purpose of this article is to examine the state of private Greek enterprises from 1960 to 2010 and to detect noteworthy management and organizational improvements during the 50-year period. In the late 1960s, the author entered the doctoral program in the School of Economics and Business at the Aristotle University in Thessalonica, Greece, and received a Ph.D. in Business Management in the early 1970s. He continued visiting Greece for academic purposes and conducted research on small business enterprises in that country through the first decade of the current century. He published peer-reviewed related academic articles some of which are included in the references of this work.

There is an abundance of literature dedicated to private Greek enterprises in Greek and English languages and, to a lesser extent, in French. Literature in the 1960s, 1970s, and early 1980s was limited, however, because there was not sufficient interest in private enterprises. Most of the literature was dedicated to the economic development of the country which was a goal of the government. Literature after the 1980s gained ground and was written in Greek, English, French, and German. However, there is no literature that describes and evaluates the status of such enterprises during the 1960-2010 period.

This article demonstrates the status of the private Greek enterprises during the 1960-2010 period and indicates the areas of progress or its absence during the period. The present work provides valuable information on the status, difficulties, problems, and the degree of progress of private Greek enterprises during the 50-year period and can serve as the infrastructure and paradigm for similar research in the future.

In the 1960s and 1970s, agriculture was the major employer in Greece with 1,810,000 employees; metals, and other raw materials had 21,000 employees; industry had 493,000 employees; electricity production had 32,000 employees; construction 210,000 employees; communication-transportation 186,000; insurance and credit 315,000; and remaining services (including tourism) 533,000 (Athens Chamber of Commerce, 1969).

In the 1960s, 1970s and early 1980s Greece failed to develop an advanced industrial complex. One reason was the large number of small enterprises in the form of proprietorships and partnerships that have dominated the economy. The profound absence of the corporate form of business to accommodate medium and large business enterprises for the attainment of effective and efficient factors of production and economies of scale are generally absent. An attempt to industrialize the nation took place in the 1960s with minimal success, but in the 1990s a strong movement of de-industrialization occurred (Theodore, 1971).

Greece went through a process of de-industrialization in the early 1990s, which precipitated the decline of new corporations' formation and the inability of existing ones to grow in size and strength (Kassapidou & Varsakelis, 2002). De-industrialization resulted in the manufacturing value-added share to gross domestic product (GDP) declining from around 20 percent in the mid-1970s to less than 13 percent in the late 1990s (Bruton, 2006). The lack of industrialization and limited number of corporations resulted in the absence of transformational leaders found in developed organizations in advanced countries in the Western World (Theodore, 2013).

The Greek market was limited and did not allow private enterprises to grow internally and externally (mergers). This was one of two reasons private business enterprises could not reach economies of scale (Ministry of Coordination, 1968). Subsequently, Greece witnessed a period of rapid industrialization, which, by the end of the 1990s, turned into Post-Fordism, thus disallowing the Greek socio-economic culture to view the country as having an industrial infrastructure.

At the end of the first decade of the 2000s, the constituent parts of the Greek economy were agriculture 4.1%, industry 16.9%, and services 79% (Greek Statistical Service, 2010). The decline of industrialization inhibited private enterprises from growing internally and externally, and the static status quo remained intact (Petmesidou & Polyzidis, 2005). De-industrialization affected the Greek economy negatively, which may otherwise have attained a balance between industrial production and services (Pittelis & Antonakis, 2003). Greece's economy was severely impacted by the world recession and the country's public debt was 112.90 million Euros, the highest among the European Union member states (Vegh, 2014). At the end of the first decade of the present century, unemployment was 68.3 percent, which was accompanied by inflation that debased the living standards of the people (Blanchflower, Bell, Montagnoli & More, 2014).

The article has the following sections: Introduction, Literature Review, Data Methodology, Results and Discussion, A Path Forward, and Concluding Statements.

LITERATURE REVIEW

In the 1960s, most private enterprises (49%) employed 1-9 employees; 9.6% had 10-19 employees; 10.7% had 20-49 employees, and 30.1% had 50 or more employees. (National Statistical Service of Greece, 1964). The average number of employees was between three to eight persons, a situation that did not allow the development of the principles of organization, such as the formation of departments and specialization of work. During the same period, 95.5% of the enterprises were proprietorship and partnerships; 0.4% corporations; and 4.2% different legal categories (National Statistical Service of Greece, 1960). In the 1960s, the first signs of industrialization in Greece appeared (Zolotas, 1964).

In the 2010s, 99.5% of the Greek private enterprises were small and employed 74.3% of the labor force;.04% were medium size and employed 10.9%; and .01% were massive and employed 14.8% of the labor force (European Commission, 2012). In Greece, small business enterprises' dominance over large companies was significant (Lubor & Vavrina, 2012). Therefore, the small size of private enterprises remained small through the 2010s and continued to stand as a deterrent to their growth and development.

The decline of industry in the 1990s limited new large private organizations in the corporate form of business having all the factors of production, professional management and well-trained and educated employees (Theodore, 2012a). The majority of private enterprises, being proprietorships and partnerships, were unable to apply dynamic concepts and forces in their operations, a situation that deterred them from organizational development and growth (Hatzikian & Bouris, 2007). Such small organizations did not have the structure, size, and factors of production found in the corporate form of business; therefore, remained stagnant (Spanos, 2005).

A number of studies in the 2010s by Kantonidou, & Chatzarakis, (2005); Hatzikian & Bouris, (2007); Komninos & Tsamis,(2008) & Kourounakis & Katsioloudes, (2009), detected that Greek small business enterprises were not competitive compared to their European Union counterparts. One out of two Greek small business enterprises tried to defend itself against a drop in their sales by shrinking its production. At the same time, only one in four attempted to respond aggressively, using product upgrading and new product launching and marketing. On the contrary, one in two European small business enterprises responded aggressively by upgrading its production capacity, while only one in three adopted a defensive attitude.

<u>Personal and Professional Characteristics and Management Practices of the Owners-Managers</u>

The second reason for the inability of enterprises to reach economies of scale was that they were family-owned and operated. Control was vested in the hands of owners-managers, who were not willing to merge with other enterprises to create larger firms that could attain economies of scale, as was the case in the United States and other developed nations (Greek Productivity Center, 1969). There was no separation between ownership and management, and professional managers did not exist. In most cases, middle and lower managerial levels did not exist (Damaskinidis, 1963).

In a survey conducted on owners-managers' inclination to innovate and improve their organizations, only16% answered positively (Alexander, 1964). The availability of qualified external management sources was minimal since such sources were absorbed by the few large domestic enterprises in the country and foreign subsidiaries operating in Greece (Psilos,1964). Creativity and innovation were still missing in the first decade of the 2000s (Papadakis, 2006). The absence of middle management, the lack of separation between management and ownership, and centralized control practices continued throughout the first decade of the present century; the same paternalist attitude prevailed (Theodore, 2013).

Private enterprises were old, a situation that demonstrated the inclination of the Greek people to favor commerce more than industry. There were no qualified and commensurately educated persons that could assist in the formation of new and larger private enterprises, mainly industrial ones, which were badly needed in the country (Coutsoumaris, 1963). In the late 1990s and early 2010s, programs for the development of private enterprises were introduce whose purpose was to pave the way for the initial phase of the organizational development of private enterprises (Theodore, 2013).

Due to the lack of long-term projections and limited understanding of the benefits of good organization and management in their enterprises, owners-managers had limited or no faith in the positive results of effective and efficient management and organizational practices (Kyriazis, 1961). Comninos & Tsamis (2008) indicated that private enterprises in Greece had resisted change and remained static, were profoundly centralized, and the concept of delegation of authority and responsibility did not exist in the minds of their leaders who centrally controlled everything in the organization. A study conducted by Psychogios & Szamosi (2007) also stated organizations continued to be profoundly centralized. In the 2010s, the principle of delegation of authority and responsibility did not exist in the minds of their leaders, who centrally controlled everything in the organization.

Managing the Enterprises

Planning for work activities was mostly short-term, except for large enterprises that were limited in number. This was due to the emphasis upon daily production and daily revenues. Owners-managers were uncertain of the future since it was difficult for them to prognosticate in the planning process (Katzourakis, 1963). Prognostication/forecast of future activities was an alien concept for them. In the 2010s, the decision-making process continued to be based on judgment of owners-managers with limited education and management knowledge to perform advanced planning decisions based on correct and valid data, which were either unavailable or limited (Hatzikian & Bouris, 2007).

In the 1990s, changes did occur in Greek management practices. As the new generation of better-educated owners-managers took responsibility, the typical managerial model moved away from the traditional supervisory or autocratic style towards a more open, communication-intensive, and team-based style (Salavou et al., 2003). However, such advanced managerial practices were present in the few large enterprises, most corporations and large partnerships, in which the principles of management and organization could be implemented.

Small enterprises that constituted the overwhelming majority of private business organizations remained under centralized control and antiquated management practices. Most Greek entrepreneurs developed their business plans by discussing them with their friends and family, rather than with an expert business consultant, who might have provided them with specialist knowledge regarding ways to work more efficiently and deal with stress more effectively (Kourounakis & Katsioloudes, 2009).

Control was implemented by the owners-managers who operated under limited knowledge and microscopic managerial and organizational dimensions. Control over employee productivity did not exist because there was no analysis and evaluation of performance of the human element. Moreover, there was no means to evaluate the input-output factors and process of the entire operation of such enterprises (Holevas, 1960).

Employee corrective actions were always considered as a negative element by both owners-managers and employees. No minimal effort was exerted by the owners-managers to inform and convince their employees that the purpose of corrective actions was to improve the human factor's conduct and performance in their enterprises. During the 2010s, efforts were made by both Greek and foreign management and organization professors and consultants to introduce dynamic concepts in controlling and developing employees (Sdrolias et al., 2007), but such methods were mainly implemented in large organizations with the corporate form of business,

Communication was mainly vertical and emanating from the owners-managers. There was limited upward-moving communication in the form of feedback. Upward communication, when demanded or allowed, was usually "filtered" so that the owners-managers received "good news" feedback from their subordinates (Dialismas,1969). Employees felt uncomfortable and under continuous pressure, but they succumbed to such conditions since other employment opportunities were limited or nil (Damaskinidis, 1961). Horizontal communication among employees was either discouraged or limited since it might be considered a violation of the modus operandi.

Studies conducted in the 2010s indicated that the element of centralization in the principles of management, including communication, was well-inculcated into the minds of owners-managers (Psychogios & Szamosi, 2007). When employees were looking for directions and guidance in their work, the owners-managers were unable to provide it to them as they were encircled in a limited and microscopic management model (Vlachos, 2008).

The Employees

Social mobility was limited during the period this study is covering. For this reason, qualified persons belonging to the lower socio-economic stratifications had tremendous difficulties in ascending the socio-economic echelons and attaining their self-actualization in commensurate employment and careers (Theodore, 1971). New positions were mainly reserved for the family members after they finished their secondary or university education, which was often not in business and economics but primarily in law, languages, or engineering (Papageorge, 1967).

Employment opportunities remained difficult even in the 2010s, during which period it took 48 months for a person with elementary education to become employed; 33 months for a high school graduate; and 30 months for a university graduate (Greek Statistical Service, 2011). In most cases, employees were relatives or friends of the family whose performance was controlled by the owner-managers (Eleftheriou & Robertson, 1999). This impeded the entrance of different ideas and practices in the organization.

Most employees were men (Holevas,1960). At the end of the 1900s and the first decade of the 2010s, the European Union pressured Greece to promote the employment of women (Papapetrou, 2006). Disparity in the compensation between male and female employees prevailed in private enterprises and continued through the first decade of the current century (Apospori et al., 2006).

Many employees had no education and experience commensurate to their positions (Damaskinidis, 1968). Those who were fortunate to be employed in the private sector were placed in non-related work based on unreliable criteria of employment selection (Kyriazis,1961). In 1961, less than 10% of secondary education institutions offered instruction in commerce, technology, or vocational areas (National Statistical Service of Greece, 1961). The educational level of employees in private organizations depicted in a survey conducted on industrial organizations in 1961 showed that 13.5% of employees were university graduates; 49.9% high school graduates; 31.9% elementary school graduates; and 4.7% attended night classes in elementary education (National Statistical Service of Greece, 1962).

DATA METHODOLOGY

The primary data incorporated in this article were produced by the author's research and publications and the secondary data by the research and publications of professors, consultants, and professional managers. The statistical data included in the study were produced by the government of Greece and of the European Union of which Greece is one of 27 member states.

RESULTS AND DISCUSSION

In the late 1900s and early 2000s, Greece realized the importance of vocational-technical education. At the end of the first decade of the current century, there were 137 public and 97 private vocational-technical schools (Greek Statistical Service, 2012). However, as late as in the first decade of the 2010s, Greece provided insufficient technical, technological, and vocational education for employees and managers in private enterprises (Kantonidou & Chatzarakis, 2005). To eliminate this deficiency, attempts were made to recruit, train, and develop qualified teachers, professors, and administrators and place them under continuous professional education in their careers (Kantonidou & Chatzarakis, 2005).

Well prepared and written job descriptions did not exist in most enterprises. Employees who belonged to groups and other classifications of allocated work were not adequately conscious of the details of their duties and assignments. Their ability to work in synergy and harmony was substantially deterred (Coutsoumaris,1963). Written policies and procedures did not exist, and employees depended on the owners-managers' oral directions. The reasons for the non-existence of policies and procedures were that

(a) policies and procedures were not considered as necessary elements and (b) both owners-managers and employees were not qualified and did not have the desire and inclination to create such valuable documents (Elis et al., 1964). The absence of policies and procedures continued to be present during the first decade of the current century (Hatzikian & Bouris, 2005).

Empowering employees through delegation of authority and responsibility was substantially limited because the owners-managers had no advanced management and organization principles due to their limited myopic organizational and managerial perceptions. Many owners-managers believed that empowering employees indicated their lack of ability to manage their enterprises correctly (Alexander, 1964). There were cases in which delegation of authority was taking place in some organizations, but the content and the delegation's degree were superfluous (Stratoudakis,1967). Even in the 2010s, the decisions were made at the top, and there was practically no empowerment and delegation of authority and responsibility resulting in the absence of middle management (Papalexandris & Chalikias, 2002). The element of motivation exercised upon the employees by the owners-managers was missing (Vouzas, 2004).

Promotions were rare and based on the age and seniority of employees. Resignations were also rare due to the minimal demand for the workforce (Stratoudakis,1967). Employee training was practically absent (Damaskinidis, 1963). In the first decade of the 2010s, research was conducted on the correct selection of personnel in private organizations (Theodore, 2012b). Such a proper selection process was conducive to improved performance. However, only large private enterprises started to implement the results of such research (Vlachos, 2009). In the late 1990s and during the first decade of the present century, attempts were made to offer education and training to benefit the employees in private enterprises (Publication Service of the European Union, 2010).

The majority of Greek employers interviewed in a study conducted in the 2010s on the education and learning of employees adopted a business orientation that placed emphasis on short-term returns and, as a result, they appeared not to value systematic learning interventions, as benefits from formal learning efforts naturally accrue in the long run. In terms of informal learning, they seemed unwilling to share their knowledge with employees for fear of losing their power within the workplace (Panagiotakopoulos, 2010).

A PATH FORWARD

For private Greek enterprises to grow and develop in the human and non-human areas of their factors of production, it will be necessary to have concurrent and continuous growth and development that will need to take place both internally and externally through mergers. A direct result of increasing industrialization will demand private organizations to operate on economies of scale. Emphasis must be placed upon the human element, both owners-managers and employees. Employees and employers will need to undergo continuous training and development to reach and operate on action orientation levels. Laconically restated, both the human and non-human areas (owner-managers, employees, production, marketing, etc.) need to undergo concurrent growth and development under the auspices of an industrialized socio-economics system.

CONCLUDING STATEMENTS

The purpose of this article was to expose the state of private Greek enterprises from 1960 to 2010 and to detect if management and organizational improvements were made during the period of 50 years. The primary findings indicate that the structure, process, organization, management, and human resources in private enterprises in Greece attained a static equilibrium of operation. This was due to (a) the lack of desire and knowledge of the owners-managers to make changes for managerial and organizational improvements; (b) the resistance of employees who viewed changes as a threat to their jobs in an economy that had limited private-sector opportunities for employment; and (c) the economic conditions of the country. The cited conditions were conducive to the acclimation of the static status quo and the minimal developmental forces.

A possible limitation of this study is the exclusion of related research during the second decade of the present century. This was because this research was intended to cover 50 years and because the author diverted his research and focused instead on small private business enterprises in Latin America. The world of private enterprises in Greece and the various private and governmental Greek and European Union business organizations can utilize the elements found in the current work as paradigms and guidelines for the development and growth of such enterprises.

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BIOGRAPHY

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Review of Business & Finance Studies
Vol. 12, No. 1, 2021, pp. 51-68
ISSN: 2150-3338 (print)
ISSN: 2156-8081 (online)

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GOING DIGITAL AND FINTECH: THE CASE OF BULL MARKET BROKERS

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ABSTRACT

This paper shows how a stock market broker of Argentina, Bull Market Brokers, underwent a digital transformation and became a financial market leader, an innovative Fintech and financial educator. This company is a unique case in which a Latin American, stock market, non-native digital company based in Argentina advances its structure, processes and products to modernize and successfully compete within the new Fintech landscape while strengthening and moving forward its leadership in the Buenos Aires Stock Market, the largest in Argentina by capitalization, listed firms and turnover. Using the case-study methodology, the main results this paper finds are that: 1) the extent of the change and adaptation to the new conditions demanded by the stock market participants are complex and multidimensional; 2) stock market intermediaries are undergoing a paradigm shift that forces them to fully digitalize their operations; 3) this shift occurs through innovation in products and processes, strategic objectives, organizational design, product development and even the target clientele; and 4) incidentally, the case finds that the ongoing COVID-19 pandemic crisis offers a window of opportunity to accelerate digital transformation in financial intermediation, forcing companies and organizations to further adapt and ultimately survive the change in the business model.

JEL: E44, G23, G24, O16, O31, O54

KEYWORDS: Brokerage Firm, Fintech, Digital Transformation, Financial Inclusion, Commercial Digitalization

INTRODUCTION

At the end of the 1990s, the Bull Market Corporation was created, condensing the personal and professional experience of over three decades of its founder and current president. Then, integrating the investment business, on April 18, 2000, it was incorporated into the *Mercado de Valores de Buenos Aires (MERVAL)*. MERVAL (Argentinean Stock Market) is a private corporation and the most important market in the country for structuring products and businesses linked to SMEs, non-standardized products in general and regional economies. Throughout these first 19 years, they gained experience in the stock market system, financial management and management of a small- and medium-sized company in the sector. They established themselves in the local market with Bull Market Brokers (BMB) and incorporated new markets through Bull Market Securities in the United States. Several business units were structured according to the specific needs of each market segment:

Bull Market Corporates: aimed at corporate clients who are interested in the capital market.
Bull Market Advisors: designed for individual investors.
Bull Wealth Management: personalized investment advice for large equity investments.

During the first stage of BMB's life, the company stood out because:

It earned support from Mercado de Valores S.A. and Caja de Valores S.A., a depositary institution in custody of all securities transacted.
It charged one among the lowest commissions on the market.
It provided distinctive personalized advice.
It favored investment diversification.

Up to this point, this was the case of a traditional stock market intermediary, which, although well structured, it was not disruptive, nor differentiated with respect to the Argentine stock market intermediaries until 2016. Since then, however, it has emerged as a leading player because of a pioneering and unique digital transformation in the financial sector in Argentina and Latin America. The change was such that it allowed the firm to quadruple its client base and double its staff in just 2 years. This development implied (and still implies) an exponential growth of virtually all of its financial, organizational and economic indicators, even having to adopt others according to the new digital paradigm, which let the firm to be recognized as a technology company dedicated to the financial industry.

This paper answers the question: Which were the main drivers of this innovative process that led Bull Market Brokers to become an innovative, disruptive financial intermediary operating in and beyond stock markets, a significant in terms of market size? To answer that question, the paper addresses the revolutionary nature of digital changes in stock markets (Gomber, Koch and Siering, 2017), the necessity to adapt all aspects of the organization to survive and to be successful in the financial world (OECD 2020), and the advancement of financial inclusion and the positive externality it causes, using the case study method. This case can serve as milestone in Argentina to understand the ongoing paradigm shift on how brokers and other intermediaries relate to customers, other institutions, and countries akin, how they manage internally and externally different aspects of an organization, how it promotes financial inclusion and furthermore how it plays a catalytic role during the Covid pandemic to accelerate the latter.

The paper is organized as follows. It first describes the digital transformation of the financial market and its impact on each of the players therein. Second, their introdu es the reader to the Argentine financial and stock markets´ indicators, features, challenges, and implications of bringing about innovating to them. Argentina stands among the least developed Emerging Stock Markets exhibiting an 8% market cap to GDP ratio, well below country peers such as Chile, Brazil, Mexico, Russia, or Thailand. Yet, Bull Market Brokers is among the top 5 drivers of that market. Third, it develops how the business structure and organization changed following the digitalization process and how the firm redefined a new identity and business model, including new financial products and services. Fourth, it reports the main findings about howBull Market Brokers´ transformed successfully and became a leader stock market broker and fintech. . It finally concludes and provides a few lessons.

The paper finds that Bull Market Brokers became a leader and successful digital broker and Fintech thanks to 1) The adequacy of the organizational structure, 2) The digitization of sales and product development, 3) The phenomenon of digital communication (Ramiro Marra CSO in his role as a YouTuber), 4) The promotion of unique financial inclusion and education compared to other brokers and financial intermediaries.

Unlike a broader literature which researches general business or trade digital transformation (e.g., MIT Sloan Management Review (2003), Matt, Hess and Benlian (2015), Cerezo, Magro and Salvatella (2014)) or a related literature on Fintech innovation (IADB, 2018) and digital disruption in financial markets (OECD, 2020), this paper makes a contribution in at least four dimensions:

a) it brings in a fresh case study of a leading innovating financial intermediary in Argentina, Latin America where most innovation by Fintech has occurred in recent years (IADB, 2018, McKinsey, 2015),

b) it develops a case among a few in Latin America where the firm undertakes an organizational transformation to full digitalize its operations while becoming a Fintech and a financial educator altogether,

c), in this respect, it introduces the role of stock market brokers in promoting financial inclusion and cost-free financial education generating a positive externality especially to millennials and people alike, and

d) it shows how the ongoing Covid19 crisis and financial market turmoil has dramatically accelerated the digitalization of stock market institutions and transactions.

But, the aspect to which this study circumscribes is about how digital transformation impacts on the business ecosystem, forcing companies and organizations to adapt. In several sectors, this effect has been so radical that it was essential to change the business model to survive. Examples include the emblematic cases of Kodak and Blockbuster.

DIGITAL TRANSFORMATION IN THE ARGENTINE FINANCIAL SECTOR

Concerning the financial sector in Argentina, digitalization has been underway for some time and is in full transition. It is becoming increasingly essential to adapt to continue competing in the market. Is it possible to imagine a bank *without Online Banking*? Or even without a telephone customer service? As described in a news article in *La Nación* in 2003, *Home Banking* began to gain popularity at that time, 19% of internet users used it, which represented 760,000 people, that is to say, that there were only 4 million people with access to the internet, which by 2003 represented just over 10% of the population. At that moment, it was used practically only to check account balances, and only 37% of consumers used it to make electronic payments. Today the situation is quite different, with almost 65% of national households with local Internet access, according to data from *ENACOM* (National Communications Agency) which, considering a population of 44 million, it yields 28.6 million Internet users, more than 7 times the digital population of 2003.

At the end of 2017, the site specialized in financial content, Roadshow (Jiménez, 2017), published that the use of Home Banking had reached 33% of Internet users, which is a noticeable growth from the 19% in 2003, but even more considerable in absolute values: from 760,000 to 10,000,000 people, from which, 4 million accessed by mobile devices. This seems to be a simple change of communication channel but implies a profound transformation in the consumer and customer consultation habits. This allows to measure the magnitude of the change in the sector, the new way customers relate to organizations, which should lead to rethinking the strategy. Looking at 2019 data (Clarín, Kantor, 2019): 90% of cash transactions are channeled digitally. The number of digital transactions jumped 60% in the last year. According to Banco Santander, the method of constitution of fixed term deposits in the last 10 years varied: From 40% to 10% at banks branches, from 15% to 76% through home banking on internet, from 0% to 12% on mobile phones.

These figures would suggest that physical bank branches will disappear in the next few years. However, the banking sector reports that a proportion of customers continue to visit them. It may be old-fashioned, but there is an analogy to physical books or printed journals that have been announced as dead for several years, yet they survive, transforming themselves. The same happens with bank branches that have increasing automated processes and the use of technological tools.

As the evolution continues, fresh players appear, without physical branches, the so-called Digital Banks. Among them can be mentioned: Wilobank, emerged in mid-2018 and during its first year gained 36,000 customers and expected to close 2019 with 100,000, Rebanking, made the same projection by the end of 2019 and has a target of 1 million users in the next 5 years, Brubank, authorized by the Central Bank of

Argentine Republic in September 2018, it began operating some months later under the slogan "We are a bank in an app" (not a bank app).

Client target estimates for a market like Argentina are surprising, especially considering that 75% of customers are between 18 and 40 years old (La Nación, Ferrari, 2018). However, *Wilobank* (Infobae, 2019) reports: “50% of our clients were previously unbanked.”. In marketing terms, the number of potential customers is increasing. But most importantly, these new digital players are already playing a social role in promoting financial inclusion. If we analyze the players in the financial sector. Banks, in general, are lagging the furthest behind in this digital transformation. On the other hand, new native digital competitors are emerging, which sometimes turn out to be only one application or platform or as mentioned above "digital banks", but whose market share growth in certain products is dizzying. The term TechFin, coined in 2016 by Jack Ma, the founder of the Chinese technology giant Alibaba, could even be named, where technology companies provide financial services with a more customer and technology-centric focus. Finally, the financial or stock market companies are in the middle of the matter. Those who stick to the traditional bench model will probably perish. There will be a space for those who incorporate novel technologies and understand the new business model, taking advantage of the pioneers. But to do this, they will have to balance financial knowledge with technological innovation and become practically a Fintech.

INNOVATING AS A STOCK MARKET BROKER IN ARGENTINA

By 2015 Bull Market Brokers found itself among strong winds of change that the financial sector was blowing pushed by domestic and external factors. Thus, in the last five years, the paradigm of investment management has changed, and it has distinguished itself from the rest of the stock market companies, relying on technology. It was not straightforward to balance the financial profile, typical of the short term, with the technological one which is more of a medium-term concern.

In Argentina, the challenge is not only to have a steady trajectory or history but also to be innovative. It implies generating innovation in a context of uncertainty and a legal framework that is very outdated. It is unnecessary to cite many indicators to show that the financial market in Argentina is far behind the region in terms of development.

Domestic credit to the private sector is considered one of the main indicators of the financial market that influences long-run economic growth. In the case of Argentina, it has stood between 15 and 20% of GDP over the last two decades, while in most developed countries it exceeds 70% with countries like the United States and Japan in which it exceeds 150%, according to World Bank data. Argentina also compares unfavorably with the region where Mexico´s credit to private sector in terms of GDP is 35%, Peru 44%, Colombia 50%, Brazil 62% and Chile 117%.

Another indicator that proxies for the development of the financial market is the stock market capitalization *(Market Cap)* of local companies as a % of GDP. In this case, the size of *Merval (Argentine Stock Exchange Index)* compared to Argentina’s GDP represented 8.9% in 2018, according to World Bank data. Compared to the 2018 world average which was 93%**,** the level of financial development lag becomes apparent. Since 1985, this global indicator has remained above 50% and has never fallen below that level. During the 2008 crisis, it fell to 56%, but by the following year, it had recovered to 84%. Analyzing the data for Latin America, in 2018 it averaged 40% and taking specific countries as examples, we find: Brazil 49%, Chile 84%, Colombia 31%, Mexico 32%, Peru 42%. In particular, the United States market is capitalized at 149% of its GDP.

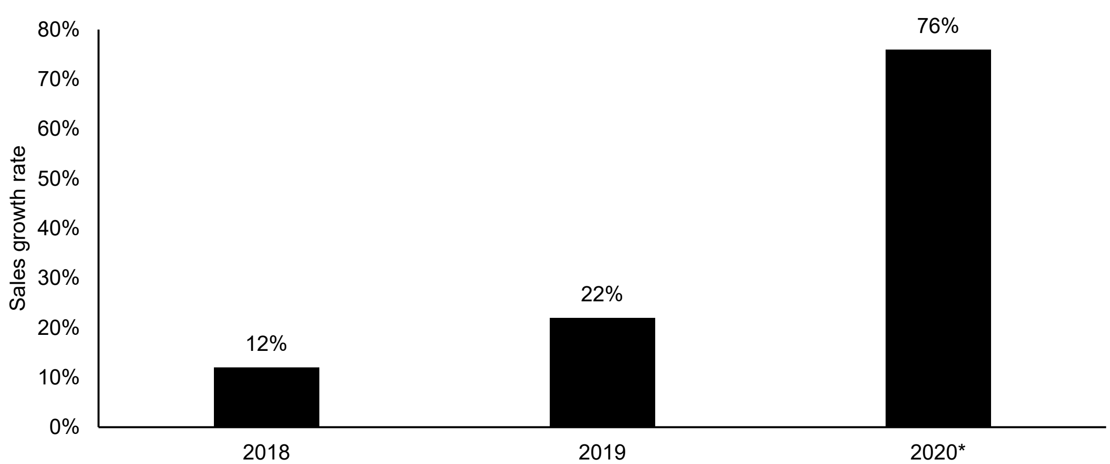
Paradoxically, Argentina's economic and banking crises and its confiscatory measures, had positive effects on the development of the digital financial market. An article in Argentine newspaper *La Nación* in 2003, just two years later, mentions that the use of *online banking* became popular and then consolidated since branches and ATMs were overcrowded amid the crisis. Then, thinking about the causes of the popularization of digital tools in the financial market, *"El Corralito"* could be described as a "black swan", as defined by Taleb Nassim in his eponymous book: "The Black Swan: The Impact of the Highly Improbable". In this way, it is possible to single out the particularities of the Argentine market and how they influence the digital evolution.

Coronavirus and Digitalization

Against this backdrop, it is possible to figure the effect of the current Covid-19 pandemic on the acceleration of the digitalization of the financial market since it forces traditional banks to operate 100% online (Cronista, 2020). Additionally, online sales grew exponentially in all items (See Figure 1), and for many companies (Ámbito Financiero, Fernandez, 2020), and it seems to be, as at the moment of writing this paper, the only way to sell and generate income.

This pandemic indirectly promoted the expansion of digital means of payment, such as *Mercado Pago* and digital banks, not to mention the digital transformation that the lockdown imposed on practically all aspects of daily life: medical appointments, education, telecommuting, among others.

Figure 1: Coronavirus Effect: Sales Growth Through Online Channels (Year-on-Year Comparison)



**Data until April 2020. Source: CACE (Cámara Argentina de Comercio Electrónico). This Figure shows the growth rate year-to-year of online channel sales considering all the argentinian e-commerce transactions. This necessarily leads to a expansion of digital means of payment which enhances the importance of financial institutions digital transformation.*

Prior to this situation, BMB took a step forward in digitalization and promoting financial inclusion, which differentiated the company in the market and from its competitors. BMB has disrupted the market, not only from a professional point of view but also from a social point of view, by providing financial training to the public, seeking alternatives to the informality of individual finance. In other words, their intention is the integration of more people into the formal economy.

BUSINESS STRUCTURE ACCORDING TO THE NEW STRATEGY

BMB increased its staff twofold in less than four years. Following this remarkable development, the real evolution or maturation became evident in the functional reorganization that took place in the organization chart. This restructuring made it possible to implement the growth strategy based on technological innovation and the new business model with previously unimaginable clients.

The first step was to identify potential new customers. To this end, the firm applied the idea of the Blue Ocean, (Mauborgne and Kim, 2004). This Blue Ocean idea means that to seek simultaneously low costs and differentiation in a market, could create a different market or a new space within an existing market. The company perceived that they were struggling in a small market with several competitors, which means they were in a Red Ocean. So instead of going the hard way by cutting commissions or launch new products for the same audience, they attempted to expand the scope of their demand. What before was not a market, now would become a target audience considering the informality and unknowledge that exists in Argentina about the financial world and financial investment.

So now their potential client is part of a middle or even lower-middle-class that historically and generationally learned to save and "invest" in dollar bills or, for the riskier, in fixed-term deposits. It would be simplistic to describe them as conservative but to understand their fear or disinterest in any financial instrument, it is enough to review Argentina's record of cyclical crises and the mistrust in its currency due to several years of inflation over than 2 digits annually and even monthly. This investor segment is very reticent with banks, both because of the recent banking crisis experience in 2001/2002 and because of the high maintenance costs and high-interest rates of credit cards that ended up being the principal business of these institutions.

As Ramiro Marra, current Chief Strategy Officer and member of the board of BMB, explains, this phenomenon that occurs in Argentina is called "the paradox of conservatism". History shows that it is safer to invest in stock market securities than in banks that have defrauded small savers. In 2001, the government froze people deposits´ holdings, converting them to another currency at a unilaterally arbitrated rate, and gave them out bonds in exchange for savings. The lack of financial education and the paradigm of "stock market investors are only experts" feeds this paradox.

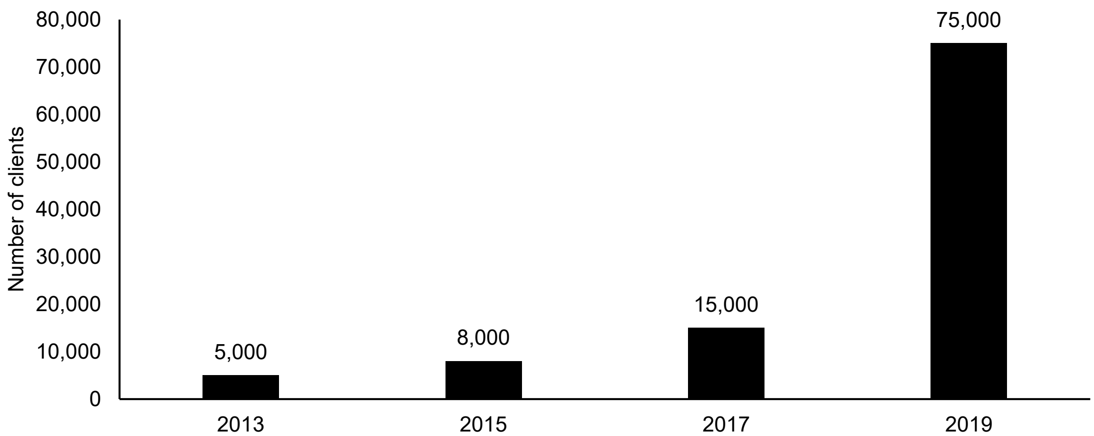
It is not only the small saver, but also an entire generation of SME entrepreneurs who have followed in the footsteps of their ancestors and professional mentors and maintain the conservative protectionist profile due to the economic fluctuations already mentioned. Many times, they are not even banked, much less leveraged, as we previously showed in the comparison of the internal credit indicator to the productive sector between Argentina and other countries.

Then, returning to the challenge that BMB had to face besides this unfavorable financial crisis remembrances and with such a distrustful public: How to capture this new target that could quintuple or even exceed 10 times the size of the traditional financial market? (See Figure 2)

The number of clients grew fourfold between 2017 and 2019, much faster than in the earlier 4 years. Indeed, from 2017 onwards, BMB was able to capture a new customer target on the back of soaring online accounts subscriptions, which suggests that a considerable part of this expansion resulted from a new kind of client. According to Bull Market Brokers' data, 99% of its growth is accounted for by young clients. Its portfolio comprises 85% clients aged between 18 and 45 years, with 42% concentrated in the younger age group of 18 to 30 years of age, the so called “millennials”.

Another impressing fact shows how the young generation is breaking the "paradox of conservatism" since 60% of the public has no or limited experience in stock market investments. We can interpret this phenomenon favorably, that despite having no expertise, they prefer this investment portfolio to that offered by the bank. The challenge is to educate this audience financially so they can be independent in their decisions and perform them wisely. Finally, the proximity of the new generations to technology makes them more likely to feel more confident about investing through an app than past generations who preferred investing in more liquid assets such as fixed-term deposits or US dollars.

Figure 2: Number of Clients 2013-2019



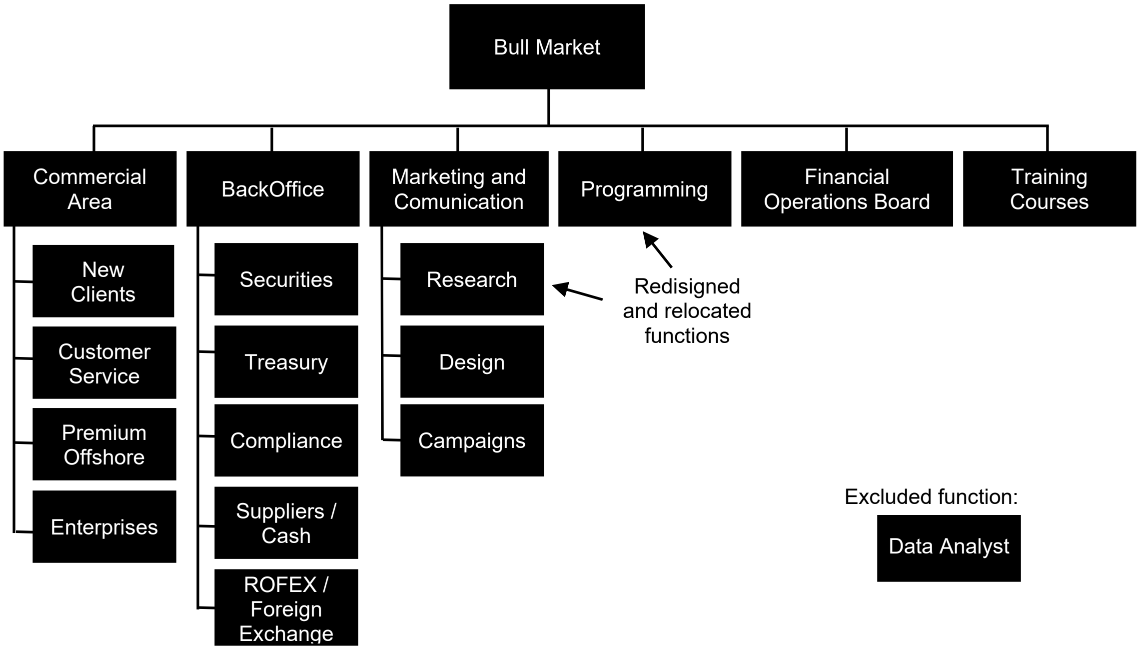
Source: Bull Market Brokers

In 2006, the U.S. Department of the Treasury stated that Argentina was the country with the largest stock of dollars per capita worldwide: 1,300 USD, surpassing the United States itself. It was followed by Panama (a dollarized country) with 648 USD, then Russia with 550 USD, and far behind by neighboring countries (6 USD for Brazil, Chile 16 USD, Paraguay 18 USD, Colombia 52 USD and Ecuador, also dollarized with 77 USD per capita). This illustrates the extent of the challenge to convince investors to switch from USD cash investment to "digital investments" in the stock market, bearing in mind the influence of previous generations.

To bolster the new stock market digital-investment strategy addressed to a new clientele, BMB first had to redesign its organizational structure. This is shown through the changes introduced in the organizational chart as of 2015 (Figure 3) to that as of 2017 (Figure 4). The key transformation was made in the department of "Marketing and Communication", which is now called "Development and Marketing". The latter expanded its functions, previously limited to the activities of a standard marketing area, to those of a Research and Development (R&D) department.

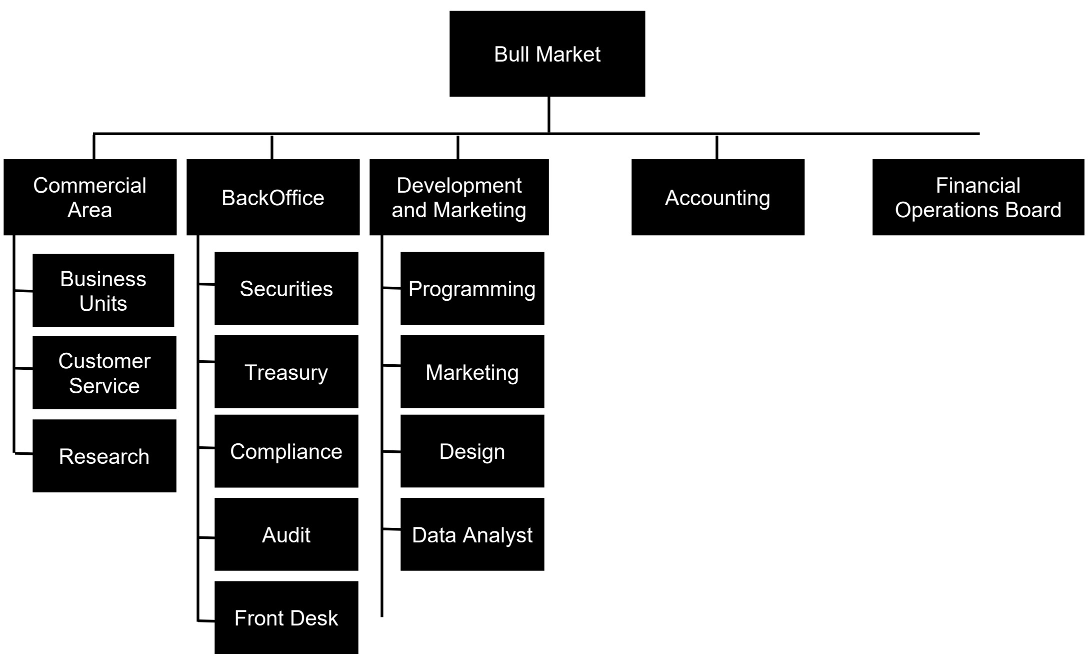
With Ramiro Marra, CSO, in charge of this area, the staff was increased from 3 to 10 people, incorporating roles such as Systems, Data Analysis and Programming. This is evidence of the inclusion of key functions for the company so that developments become closer to the market. On the other hand, restrictions were established in the direct contact between Development and Marketing and the client in order not to bias the area with day-to-day problems or claims that do not contribute to the development of solutions. For this reason, they relocated the Research department to the Commercial area with the rest of the direct contact functions of customer service. As part of the new strategy, the firm is oriented towards the needs of the market and its clients and potential clientele, dividing the identification functions in the Commercial area and the development functions in the Development and Marketing department.

Figure 3: Organizational Chart 2015 Before Restructuration



This Figure shows BMB organizational structure before restructuration and illustrate a more traditional not-digital-focused organization. It shows the lack of importance of analysis of information and databases by not having a data analyst position and the disconnection between the market (Marketing and Communication-Research) and the operations (Programming).

Figure 4: Organizational Chart 2017 After Restructuration



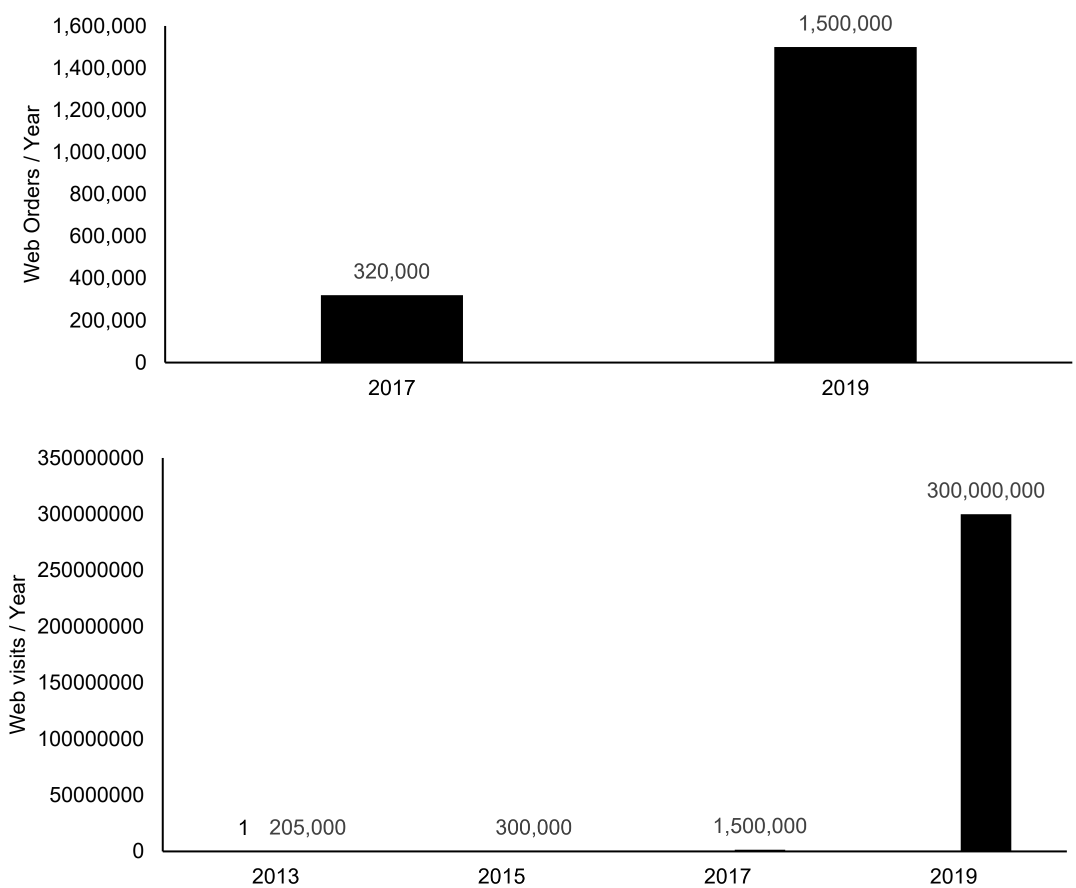
Source: Bull Market Brokers. This Figure shows BMB organizational structure after the restructuration and shows an integrated vision between the market and development (programming) of new products and services. Also, due to the vast amount of information generated by the digitalization of all the processes, it was incorporated the Data Analyst position in the same area where the R+D is. Finally, the day-to-day interaction with clients (customer support) was concentrated in the commercial area together with the research function so as to understand better the market needs.

With this adaptation of the organizational structure to meet new market demands, BMB was on the right path towards becoming a Fintech.

THE NEW IDENTITY AND NEW BUSINESS MODEL

At this point, we have already listed BMB's differences with a traditional brokerage house. When the market just understood this digital transformation, BMB was already scaling up and profiling towards a business model more similar to that of a Fintech. Its key indicators were no longer the number of clients and operations but the over 1.5 million annual visits to the website or the 320,000 web orders per year. Here again, the vertiginous change can be seen, since this data from 2017, two years later, is outdated in order of magnitude (See Figures 5). This reinforces the need to get into this digital transformation and how far behind a company would be with such a 1- or 2-year delay.

Figure 5: Key Indicators Since Digital Transformation



Source: Bull Market Brokers. These figures shows the 2 most important indicators that make evident the digital transformation: the web order growth by 5 times from 2017 to 2019 and the exponential growth of web visits in the same years due to the fact that almost every client access to his account through it and because they incorporated a web "dolarhoy" which shows the dollar price and it is used as a reference source.

Just as BMB was converting from a stock company to a Fintech incorporating technology into its financial-stock business knowledge base, there are companies in the Fintech market or TechFin as Jack Ma would say. They took advantage of technology and their status as a digital native to venture into the financial world, such as invertironline.com. This difference is even clearer in the name that refers to a website and not to a group or stock exchange company such as the Bull Market Group.

On the other hand, banks are far behind in this digital race and in understanding the distinct needs or preferences of the market, having difficulties in sustaining the demands of new investors who are looking for complex investment instruments based on technology. Also, they do not want to be charged for simple transfers, withdrawals or maintenance of accounts and cards, nor are they interested in the different types of insurance. They want a more simplistic and more ephemeral relationship than that proposed by banks with their protocols and authorization forms.

The Economist Intelligence Unit generates a ranking on regulatory developments that impact financial inclusion and evaluates 55 countries in terms of:

Public policy and government support
Stability and integrity
Products and points of sale
Consumer protection
Infrastructure

Argentina ranks in the 9th position, which it shares with Brazil, among the 55 countries in the ranking elaborated by this publication. They identify as key barriers the necessity of coordination between authorities and the private sector, and the lack of regulation of correspondent banking agents. The index suggests that an increase in coordination between the public and private sectors could be the crucial facilitator for financial inclusion in Argentina.

Finally, the report on Argentina's National Strategy for Financial Inclusion 2019 of the Ministry of Finance provides a fundamental piece of information that permits the inference of the responsibility of the banking system in financial inclusion until now: the Argentine financial system comprises 78 financial entities, of which 63 are banks and concentrate over 98% of assets and liabilities, leaving less than 2% for the remaining financial companies. Born less than 5 years ago, Fintech companies might play a fundamental role in financial inclusion in the coming years thanks to the sustained growth they are experiencing and their more accessible essence.

We conclude in Argentina this digital market is incipient: its potential is not fully exploited yet, leaving many clients, investors, and savers to be captured. This means that competition and the complementarity of experiences and knowledge make the business model evolve rapidly, so firms need versatility and quick adaptation to changes.

COMMERCIAL TRANSFORMATION

Throughout the digital transformation of the stock brokerage business, the challenge is not only to integrate business with technology but also to persuade the potential audience, then new communication channels are required. To this end, Bull Market Brokers' Chief Strategy Officer and Board Director, Ramiro Marra, assumed the role of digital communicator.

The first thing he and his team have noticed was that many people were looking for financial information through YouTube. It was a demand for rapid, concrete and uncontracted education, so in the absence of well-grounded material, with experience and with the support of a serious company in the capital market, the idea of making video tutorials with these characteristics arose.

At first, it was practically an experiment, another marketing activation action, and the impact it would have was not even suspected. The first video was published at the end of 2017 as a result of repeated requests from the few digital customers interested in Cryptcoins. By then, they were a minority considering the potential number of clients of that channel that were later captured, but they were already many if we compared them with the number of clients that BMB had at that moment.

As Ramiro Marra said in an interview, the authors had with him:

"One characteristic that distinguished us in terms of marketing was that I took a role towards the financial and the communication market, that was demanding financial information concretely in Argentina. People were looking for that information on YouTube. We saw that nobody was talking about what we were doing, but that there was a demand that was not satisfied because what they were looking for was education. Education that was rapid, concrete, uncontracted did not exist for finance. For other subjects, you could find substitutes like cooking, how to fix something in your house, like solving problems that you had with your computer. We believed that from the role we already had of preeminent positioning in the capital market, we could give that differential in YouTube and social networks".(Ramiro Marra, recorded interview, 2nd of October 2019)

Then, everything came up with the question: "Is Bitcoin a Financial Bubble?" To answer it, Ramiro Marra and his team filmed a video of almost 4 minutes talking about the risks of investing in bitcoins and comparing it to stock market investments. As part of the communication strategy, the video looks more like a viral bloopers style than a capital market expert giving a quick training.

The first videos proved that the bet was right. This simple communication method, coupled with the support of BMB's knowledge, met the unsatisfied demand they had identified. Throughout over 200 videos, Ramiro Marra built his digital identity and exponentially gained followers or potential clients, reaching 100,000 YouTube subscribers at the time of writing this article. Also, he has 6 videos with over 100,000 views, with 2.3 million being the largest. This trend of communication through digital media spread to all professions and arts, thus being born Financial Youtubers, Political Youtubers or Traveling Youtubers. See for instance https://www.youtube.com/watch?v=QmRHfd2xmOo (Spanish version with self-generated English subtitles).

With an average duration of 5 minutes, he reached 10 million views among all the videos. It is difficult to estimate the number of people trained as the same person may have watched several videos or re-watched the same video. To give an order of magnitude, at least hundreds of thousands of people learned how different financial instruments work such as a fixed-term deposit or a Central Bank bill, how a stock exchange broker works and its advantages over banks, and the first steps to dispose of their savings and investments and know-how to operate autonomously in the stock market environment.

If these numbers are compared with the formal education of a university or traditional institute that teaches financial courses, where the order of magnitude is hundreds or thousands per year, the impact and scope that is achieved with these videos are clear. Continuing with this social role of financial training, which is greatly undervalued in society and in the formal education system practically absent in the initial levels of instruction, a program of free online and classroom courses and training was created, called *Bull Training*, which reached over 30,000 people in early 2020.

It is also necessary to mention that this new target, the people who were reached with content and financial education through those digital media were not customers of the banks or the financial system overall. For example, at the digital bank *Wilobank* half of its customers were previously unbanked. Not only in technology is it imperative to innovate continuously but also in marketing and in the way of communicating with customers to stay current and reach them with the message we want. In line with this concept, Ramiro Marra commented that "Today it is a YouTube channel, tomorrow it can be a Reality Show or Instagram lives" showing how the strategy can be defined with the following oxymoron: the constancy of the change proposed by the market.

Concerning this novel way of reaching customers, we can conceive of a closer relationship, as the topics of the training videos arise from the viewers' comments and queries, in addition to offering them a communication channel available 24 hours a day. This closer affinity exists, paradoxically, in a context of virtualization of relationships in modern business. Thus, another axiom of the digital age becomes relative, in which relationships are supposed to be less spontaneous and more distant.

NEW PRODUCTS AND SERVICES

BMB had to design and program distinct products, according to the needs of the new market. This involved a series of technological changes and evolutions in management and data processing models. Thus, for example, Artificial Intelligence and Machine Learning methodologies were applied to provide personalized recommendations on the Mutual Funds (MIFs) based on the profile of each investor, offering them a specific platform under the concept of “MIF Supermarket”.

Another vital service in BMB´s transformation was to provide the possibility for clients to open accounts 100% online. In 2017, *Comisión Nacional de Valores de la Argentina, the national stock market regulator,* authorized this by modifying an earlier regulation in place. No law or decree was necessary, but an adjustment in the current regulations. It is interesting to stop at this point since the regulatory change was fundamental to this evolution. This reminds the example of the DMA (Direct Market Access), which allows customers to interact with their investments directly in the market, whereas before it was needed an operator to place the orders. That delayed the efficiency and attractiveness of the sector, increased its costs and took longer to execute. This regulation was already present in most countries of the world.

Nowadays, the delay is not attributed to regulations but rather to the infrastructure (stock exchange, banks, the market in general) due to years of disinvestment as a result of outdated regulations. *Banco Industrial BIND* is a case of successful investment in infrastructure, which was carried out in the framework of a new focus on digital. To cite two examples, they have implemented API (Application Programming Interface) technology to connect the bank directly to operators or brokers. They have also incorporated DEBIN, which allows an immediate online payment to be made to a human or legal person. Recently this last technology was applied for the constitution of fixed-term deposits online in any bank without the obligation of being a client.

Finally, it is also noteworthy that BMB implemented the first online currency exchange office, with the importance that this represents for the demand for foreign currency by Argentine savers and investors, improving the user experience for the transaction as well as reducing the cost by minimizing the exchange rate spread in comparison with other entities.

This is a clear example of a Blue Ocean, which was initially governed by differentiation as it was a fresh market but in a matter of 2 years, it was transformed into a Red Ocean where suppliers compete for prices and what rules are the lowest costs. There are already several players in this market in which is increasingly difficult to be distinguished except by the lowest price.

This transition traditionally took place over prolonged periods, but since it is a digital sector, its dynamism shortened that time to 2 years. The speed at which consumption patterns are changing, for example, with the use of home banking or with the growth in the number of clients of the new Fintechs (La Nación, Ferrari, 2018) evidences this transformation. This technological development was also used to improve internal operations and optimize investment decisions in each instrument within an MFI to maximize its results. Furthermore, all these changes in products and services offered, in the new relationship with clients and, summarizing, in the whole paradigm of the industry, caused an improvement in BMB profitability (see Appendix).

All this was feasible due to the organizational redesign through which development functions were incorporated into the commercial and marketing area. Also, the updating of regulations at government and state-level was critical, especially in a country that has many outdated laws and regulations of the legal system. For example, labor laws are almost 50 years old and little updated, leaving out the new working modalities, such as telecommuting, and with it, hindering their correct judgment and generating a gap with the market practices.

Regarding the rules of the financial system, progress has recently been made in enabling and facilitating the incorporation of technology through the Productive Financing Law (*Ley de Financiamiento Productivo),* formerly known as the Capital Market Law. However, as in every transition and change, there are stakeholders in favor and there are those who devote a notable deal of effort to lobbying against them. In this way, the banking sector continuously presses for specific regulations to limit the operation of Fintech, and the latter demonstrates their boundless capacity for financial inclusion that its innovations have.

Sooner or later digital transformation will definitely prevail, like the 24-year transition from the Cheque to the E-cheque (Liendo and Sturzenegger, 2020). The first step was the Law No. 24.452 in 1995 that allowed the signature to issue a cheque to be through electronic system; nevertheless, it did not contemplate the transmission nor the deposit of cheques, so cheques still needed to be issued on paper. In 2016 there was another attempt to eliminate paper by allowing the electronic deposit of cheques, but the obstacle was the signature, which was considered “electronic signature” and not digital signature. Finally, with the Decree No. 27/2018 which reforms the 1995 Law, the Central Bank was able to create e-cheques which are more secure, cheaper to operate, absolutely trackable and allow better credit analysis. This battle against traditional paper defenders was over.

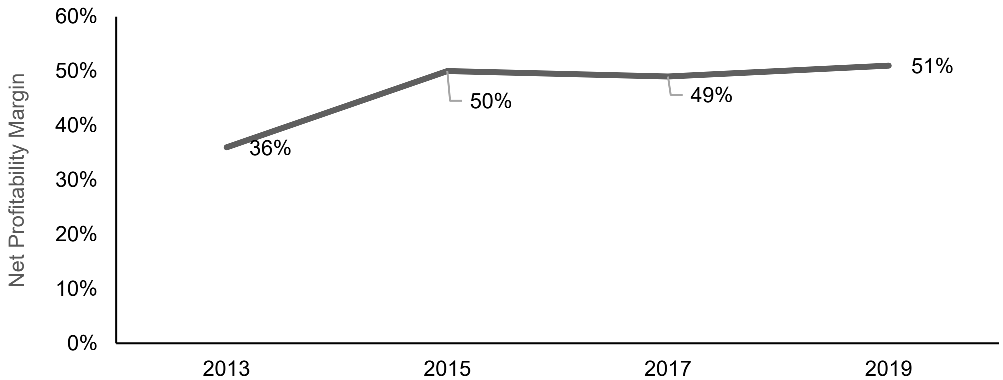
It can be named Digital Transformation, Market Broker 4.0 or just Fintech, but all these changes brought a revolution in the financial industry to which it is mandatory to join in order not to perish, a revolution comparable to the invention of the digital camera for the photographic industry or online content for film rentals.

FINANCIAL ANALYSIS

The digital transformation was not only critical to the survival of the financial industry but also improved the company's profitability. Firstly, to demonstrate this improvement in general terms, we use the financial indicator "Net Profit Margin" which is obtained by dividing the Ordinary Profit before Taxes by the Income. This indicator shows an increase from a level of 36% in 2015 to an average level of 50% in the last 3 years (see Figure 6).

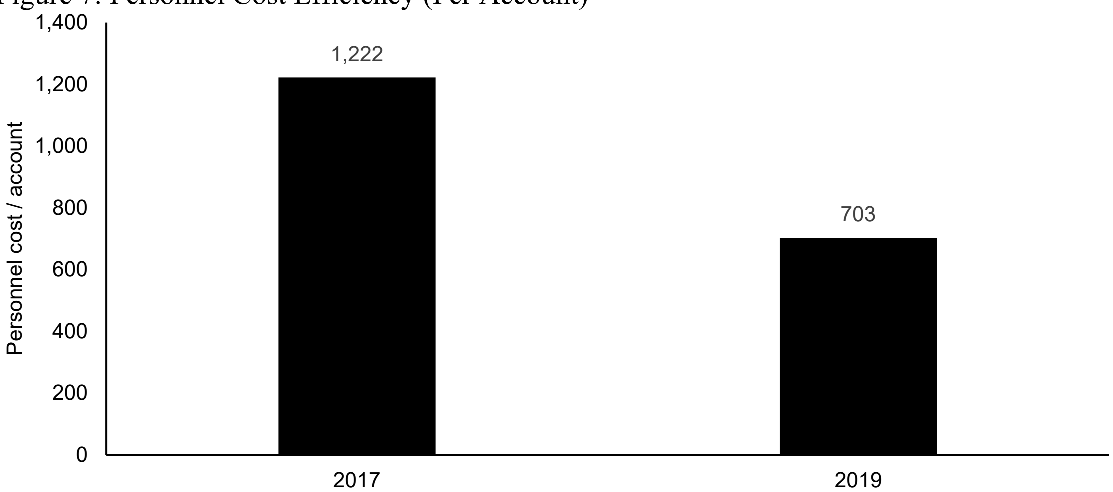
On the other hand, new services and products rarely generate much income in the short term, but they bring in new accounts. For example, the Mutual Fund market produced large inflows of new clients and contributed to the company’s position, which translates into higher revenues but in the long term. Finally, personnel costs became more efficient from digital transformation. If we analyze them in comparison with the size of the operation (measured in the number of accounts), we can see that from 2017 to 2019 it was reduced by more than 40% nominally. That is, without considering the inflationary effect that accumulated from both years was higher than 85% (see Figure 7). Consequently, we conclude that by digitizing the relationship with the client, an incremental number can be served with fewer resources.

Figure 6: Evolution of the Net Profitability Margin



Source: Comisión Nacional de Valores This Figure shows the evolution of the company profitability margin from 36% in 2013 to an average of 50% in the last 5 years. This was achievable by reducing costs of the operations by client and the massive growth of the number of clients, even with a reduction of the income by client by opening to smaller ones.

Figure 7: Personnel Cost Efficiency (Per Account)



Note: 2019 Salaries and Social Security Contributions were projected. Source: Comisión Nacional de Valores and Bull Market Brokers This figure shows the decrease of personnel cost by account from 2017 to 2019. It is important to stand out that it is a nominal comparison and it should be considered the high inflation that occur in those years to make the analysis more accurate, so the decrease is even higher.

CONCLUSION

The new paradigm of the financial sector is already settled and has led to the failure of conventional stock market brokers and dealers that could not adapt to the ongoing changes in Argentina and other Emerging Countries. One of the possible consequences is that these traditional institutions end up selling their assets to new digital players (Cronista, 2019). As for banks, the same fate can be predicted if they do not adapt soon and change the way they conceive, organize and operate their business.

In this paper we have learnt that Bull Market Brokers, an Argentine-based stock market intermediary is leading the paradigm shifts not only among stock market brokers but also among digital natives, both in Argentina and Latin America. The firm anticipated the transformation of the sector, moving forward timely and extensively, and innovating as follows:

First, new niche and target: They identified the impact that digitization would have on the financial sector. Then, they anticipated the competition in discovering the new demand and the potential customer.

Second, design and Organizational Model: They introduced changes to the organizational chart, giving greater importance to the synergy between the Commercial and Development areas.

Third, commercial digitization: They migrated to a 100% digital customer relationship model and rethought products and services for them.

Fouth, new communication and marketing: They promoted themselves in the digital media channels with an innovative strategy (Financial YouTuber) and a concise message, using the image of the Chief Strategy Officer as a hinge.

This change for the company was so radical that even today it has a significant role in financial inclusion, bringing investment knowledge and facilitating access to people that were previously excluded from the financial system.

PATH FORWARD AND FUTURE RESEARCH

This case yields some lessons for future academic research and to other stock market brokers akin, both in Argentina and Latin America, namely:

Bull Market Brokers has led a convergence process of the Argentine stock market and more broadly the financial industry to integrate in a single platform at least each of the following services and products: 100% digital transactions of any securities traded on various Stock Exchange, online banking, and currency exchange.

Bull Market Brokers has led a convergence process of the Argentine stock market and more broadly the financial industry to integrate in a single platform at least each of the following services and products: 100% digital transactions of any securities traded on various Stock Exchange, online banking, and currency exchange.

In order to transform the company into a fully digital, online operation, it was necessary to redesign the business structure and rethink the research and marketing functions by incorporating modern tools such as big data, machine learning and other techniques to support the rapid growth of Bull Market Brokers ‘assets, customers and transactions.

To expand their operations, increase sales and profits, stock market brokers should also broaden their customer base by reaching out to young millennials with nearly no financial education, as the experience of Bull Market Brokers demonstrates.

The coronavirus pandemic the world is going through at the time of writing this article, will further accelerate the paradigm shift towards digitization, forcing many financial institutions and intermediaries to adapt to it faster than expected. this case study provides a framework to analyze and understand in depth this new scenario and new financial business model.

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ACKNOWLEDGMENT

This paper is based on the MBA dissertation of Federico Colombo. The authors are grateful for generous financial and academic support to the Graduate School of Business of the Pontifical Catholic University of Argentina, and in particular to its MBA staff. They also acknowledge invaluable comments from two anonymous referees, participants at a seminar held in 2020 in Buenos Aires, and to Ramiro Marra, CSO of Bull Market Brokers who generously provided all kind of information to make this case-study publishable.

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Review of Business & Finance Studies
Vol. 12, No. 1, 2021, pp. 69-78
ISSN: 2150-3338 (print)
ISSN: 2156-8081 (online)

www.theIBFR.com

MITIGATING RISK AMIDST CATASTROPHIC EVENTS: A FOCUS ON SHAREHOLDER AND OPERATING AGREEMENTS

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ABSTRACT

Risk management has traditionally encompassed the systematic identification, analysis, strategy and response to a myriad of factors that impact the sustainability of a business. Effective risk management strategies attempt to foresee and manipulate future outcomes by proactively, rather than reactively, addressing variables that may adversely impact the profitability of an organization. Responses to possible risks necessitate the creation of contingencies that outline the execution of pre-determined action plans that would be triggered if the anticipated risks were, in fact, to arise. This paper provides a discussion of risk reduction techniques which can mitigate catastrophic macro risk events such as the COVID-19 pandemic.

JEL: K10, K12, K15, K19, M20

KEYWORDS: Risk Management, COVID-19, Business Liability

INTRODUCTION

At different times in history, society has faced financial, banking and health challenges. Earlier health crises, such as 2016 Ebola, 2002 SARS and the 1918 Spanish influenza, affected markets and forced the introduction of new risk control mechanisms. Financial crises such as the 2008 housing bubble, the European Sovereign Debt Crisis, and the 2015 Chinese Stock Market Crash, forced strategic risk management changes. Risk management during and after the Covid-19 pandemic will change too (Martinez Arroyo et al., 2020).

The Covid-19 pandemic forced industries and firms to confront the reality of impacts related to long-term restrictions and shut-downs of businesses. These events were mostly unforeseeable through any reasonable forecast attempting to predict future risks based on history. These impacts affected most firms and industries regardless of how effective an organization was in identifying potential risk factors that could adversely impact a business.

According to the International Monetary Fund (2020), the global economy will have lost approximately $9 trillion (IMF 2020) due to Covid-19. Contrary to natural disasters such earthquakes, tsunamis, or hurricanes, where risk is transferred to the insurance industry, or a federally funded organization such FEMA, there exists a limited supply of private insurance to deal with financial impacts of a pandemic (Hartwig, Neihaus and Qiu, 2020). Hartwig, Neihaus and Qiu, (2020) argue the private insurance market has failed to bring alternatives for risk transferring products. Indeed, even measuring the magnitude and evaluating the performance of nations to control Covid-19 risk present challenges. Chang and McAleer (2020) and McAleer (2020) develop a measure to evaluate the performance of nations, finding that rapid response and detection and reporting largely impact the performance of nations in responding to the Covid-19 pandemic.

Unfortunately for firms, and insurance companies, these national responses are not within their control and thereby introduce additional uncertainties.

Small Businesses are not exempt from the impact of global health crises like Covid-19. Sraders and Lambert (2020) estimate that approximately 100,0000 small businesses will close because of the current pandemic. Liguori and Pittz (2020) present a number of strategies for small business survival. They underscore the importance of exercising resilience, willingness to change, and an organizational culture open to recognizing opportunity and the need to shift strategy.

One year into the Covid-19 pandemic, we observe entire industries, rather than specific services, being avoided. Noteworthy industries affected include manufacturing, travel and leisure, oil and gas, retail, entertainment and higher education. It would be difficult, if not impossible, to have foreseen the risks of a pandemic. Prior to the pandemic some industry sectors had for decades, and even centuries, been successful and thrived in cultures around the world. However, a number of these industries and sectors experienced devastating business losses associated with the pandemic.

This paper extends the extant literature by providing a primer in risk management with special emphasis on applications to the Covid-19 pandemic. The remainder of the paper is organized as follows: In the next section we discuss the existing literature and commonly used risk control measures. Next, we discuss the role of shareholder agreements to mitigate risk. The paper closes with concluding comments.

LITERATURE AND BACKGROUND

Responses to business risks utilizing traditional risk management principles include one or more of the following: Avoidance, mitigation, transfer, and acceptance. We structure this section around these four principles. Businesses manage risk formally by acquiring insurance coverage or informally by personally accepting risk. Thus, risk management involves considering safety, potential for profit and/or losses, and corporate reputation. Companies, then, set scenarios or alternatives and constraints, often referred as risk criteria, risk acceptance criteria, and tolerability criteria, to simplify judgements. Risk acceptance has, in recent years, been under scrutiny as some argue risk acceptance is not in the best interest of society and as such it should be regulated (Aven, 2016, Aven, 2011; Aven and Abrahamsen, 2007).

Risk avoidance occurs where a business seeks to eliminate the possibility of a risk altogether through the discontinuation of activities associated with the specific risk identified. A business chooses to eliminate a hazard or activity that, if they are adversely impacted by that activity, would lead to a decline in profit or increased exposure to liability. This often occurs when an organization decides to discontinue offering a service that produces especially high liability exposure thereby making the firm vulnerable to loss. For example, a construction contractor may opt to exclude asbestos removal as part of their proposal for a renovation due to potential liability from employees and clients. Instead, they specifically state that it is not part of the services included in their bid.

To avoid the risk associated with Covid-19, companies of all sizes have changed work schedules, locations, and technology. Some businesses require employees to work from home thereby avoiding the risk of Covid-19 exposure in the workplace. Businesses rely heavily on IT and broadband services to continue providing customer services, sales, tech support, etc. (Weil and Murugesan, 2020). The educational system has been transformed in a very short period of time from in-person to virtual or online education (Madani, 2020). Event organizers moved events from in-person events to hybrid or virtual (Murphy, 2020)

Risk mitigation, also known as optimizing risk, occurs when an organization seeks to reduce potential losses due to an activity they are engaged in and wish to remain in. In risk mitigation, businesses seek to limit the impact of a risk such that, if a problem occurs, it will be managed to reduce the impact. Waterer et al.

(2020) offers some insights to business on how to mitigate risk during the Covid-19 pandemic. They indicate that businesses must review their potential exposures, policy coverage, supply chain implications, and create a revised of plan of action.

Many examples of risk mitigation around the Covid-19 pandemic exist. Mask wearing, social distancing, avoiding crowded, avoiding poorly ventilated areas, and washing your hands are all considered cornerstone to Covid-19 risk mitigation (CDC, 2020). However, more drastic measures have been necessitated in some industries. Restaurant owners, for example, explored various alternatives to traditional sales channels amidst the Covid-19 crisis including the expansion of outdoor dining, concentrating on food delivery, curbside pick-up, and selling food packaged as groceries, rather than closing their operations altogether. Retailers who closed their brick-and-mortar stores amidst the Covid-19 crisis re-designed and upgraded their websites to expand e-commerce sales, turned social media platforms into sales channels, sold goods on Amazon, Etsy and other e-retail sites, and added delivery options to mitigate risk. Professionals such as attorneys, accountants, and mental health professionals utilized video conferencing platforms like Zoom to stay engaged with clients. Other businesses deemed 'essential' developed risk mitigating plans including taking temperatures of employees and customers, changing the layouts of businesses to enable social distancing, and limiting foot traffic.

Risk transfer constitutes the underlying tenet of insurance coverage. Risk is offset and shifted from the insured to the insurer, as a voluntary arrangement between two parties and a mechanism to reduce or limit the potential liability of the insured. The insured safeguards itself from the implications of financial risk and future contingencies. The insurance company accepts strictly defined financial risks from the insured. If a worker is injured, the insurance company accepts the risk. If a building is destroyed due to fire, flood, or other natural disaster, the insurance company funds the replacement.

Business Interruption coverage has been available to firms for many years. This insurance covers the loss of income a business suffers after a disaster. The income loss covered may be due to the disaster-related closing of the business facility, and / or due to the rebuilding process after a disaster or the loss of income directly resulting from the disaster. Richter & Thomas (2020) examine risk management for insurers and the potential for business insurability due to Covid-19. Specifically, they posit that prospects for substantial loss accumulation and external moral hazard due to public policy decisions complicate business Covid-19 insurability. They argue that business interruption due to Covid-19 may not be an insurable risk. They later offer solutions to mitigate the future impact of pandemics.

The Covid-19 pandemic offers a case study in application of business interruption insurance. Does coverage extend to the Covid-19 pandemic? Most business interruption policies contain five conditions that a claim must meet to be successful: "physical damage, to insured property, caused by a covered peril, resulting in quantifiable business interruption loss, during the period of time it takes to restore the damaged property." Nevins and Lewins (2020). How these five conditions are interpreted directly impacts how recoverable a business interruption claim is. Nevins and Lewins (2020) find claim payouts depend on the language use in the insurance policy terms and conditions and it is uncommon for insurers to honor business disruption claims due to human infection illnesses.

Indeed, due to government ordered shutdowns amidst Covid-19, judges dismissed more than four times as many business-interruption lawsuits as they have allowed to proceed in the first half of 2020, though the trend began to shift towards the end of 2020. Some insured have successfully been compensated by their insurers due to Covid-19 shutdowns. Lloyd's of London predicted that the insurance industry could face at least $100 billion in total underwriting losses from the pandemic (Feeley and Chiglinsky, 2020). Williams Walsh (2020) investigated if business interruption coverage covers businesses temporary closures or disruption due the current pandemic. Walsh finds that insurers are refusing to payout claims due to the pandemic. This has force thousands of business owners to sue insurance companies. Business owners have business interruption coverage that commonly covers closures due to "viruses, bacterium, illness or diseases."

Alternative risk transfer falls under the risk transfer category but occurs when traditional insurance coverage is waived or unavailable. In these instances, the risk of liability is accepted by the client. Examples include a construction contract in a 3rd world country where there is political unrest. In such a scenario, the materials necessary for the project may be difficult to transport and face a significant likelihood of delays in arriving to the work site resulting in difficulty predicting completion dates for contractors. The cost for transport of such materials, along with the acceptance of loosely defined deadlines for project completion, will often need to be accepted by the client. Contractors should hesitate to accept such highly likely pitfalls that would adversely impact their profitability. Currently, the same issues can be applied to other manufacturing and retailer contracts since a pandemic is now clearly foreseeable.

Risk acceptance, also known as risk retention, occurs when a business recognizes and identifies a potential risk, but acknowledges that exposure and assumes the risk. This commonly occurs when a company believes that, should an adverse event occur, it would not be detrimental to the company. Moreover, the potential loss is not significant enough to justify taking action to eliminate the risk or investing the resources necessary to avoid it. In other instances, businesses may identify the risk as being so unlikely or so small that it should not be prioritized in planning or budgeting. In these instances, businesses simply opt to accept the risk rather than taking steps to hedge, indemnify or avoid it.

Businesses seek to strike a balance between potential costs of remediating a risk if it were to arise versus the expense of preventative measures to avoid it altogether in relation to the statistical likelihood of it even occurring. Examples of such risks might include, but are not limited to, potential legal liabilities, natural disasters, work stoppages, increased competition, economic downturns, credit risk and pandemics. Maintaining smaller inventories, agreeing to shorter lease terms of real property, clarifying whether pandemics and government shutdowns are covered by insurance, investing in IT to expand on work-from-home protocols, expanding customer access options to goods and services, diversifying supply chains, and leasing rather than buying equipment are just some of the considerations that may become more prevalent and be more attractive to a business that accepts such risk.

Due to the unprecedented stress on business survival across the globe, the Covid-19 pandemic has caused businesses to react to a previously unforeseen variable that has crippled profitability for many organizations. Firms have been challenged by multiple factors including restrictions on the number of patrons permitted to enter their establishment, limitations on hours of operation, and even government mandated lockdowns where little or no business can be transacted. Other limitations range from general contractor's limitations on the number of crew members permitted to work on a job site, to restaurants being limited to as little as 0% indoor capacity or outdoor-only seating, to appointment-only entry into retailers with extreme limitations on the number of entrants permitted at any one time. Profitability is often no longer the goal. Instead, the goal becomes outlasting the pandemic by operating in a cost-effective manner and approaching break-even.

SHAREHOLDER AGREEMENTS

In the last four decades, the number of pass-through businesses tripled. This expansion can be attributed at least in part to the advent of limited liability companies. Over 50 percent of the labor force works for pass-through companies. In addition, sole proprietorships, S-corporations, LLC's and closely held businesses make over 60 percent of net business income in the U.S. Investorships represent approximately 8 percent of all pass-through-taxation companies (Pomerleau, 2015).

Companies often use investors to bring in new capabilities, access new markets, access new intellectual property, expand infrastructure, and to reduce risk. However, investor shareholders also bring management challenges, including investors' differences on what the main objectives for their relationship are, poor communication, week governance, and the inability to identify and change when faced with rapid market or economics changes (De Backer and Rinaudo, 2019).

As the pandemic continued from its beginnings in 2020, and persists into 2021, many business owners seek to mitigate their risk of survival by offsetting the potential losses involved with business failure. They sometimes do this by offering shareholder interest to key employees and investors. Owners see the possibility for a lifeline and injection of capital, along with a way to transfer a portion of their risk if their business does not survive the pandemic.

A Shareholder Agreement is the legal tool that outlines the terms under which two or more parties agree to work together for their mutual interest and the prosperity of an organization. Such agreements designate the rights and responsibilities of each investor or entity involved, and how various anticipated risk factors will be addressed if they were to arise. If structured thoughtfully, they outline various scenarios and how these scenarios will be handled in a manner that effectuates outcomes with as little disruption or discord to the business or shareholder relationship as is possible. In essence, they encompass several areas of Risk Management. They seek to anticipate issues so that investors and a business can avoid, mitigate, transfer or accept potential foreseeable risks.

This contract that binds investors or shareholders should identify the potential risks within the particular industry of the organization and address these risks within the document, as well as clearly delineated buy-in and sale of interests ("Buy-Sell Agreement"). Regardless of industry, certain factors should be evaluated and addressed in a Buy-Sell Agreement. Tables 1 and 2 show twenty-five factors that should be negotiated, clarified, and integrated by potential investors or shareholders prior to executing such an important legal document for closely held organizations. Table 1 shows factors related to firm formation and finance. Table 2 shows operational and end-of-arrangement factors.

A business relationship is much like a personal relationship. The parties involved need to have clearly communicated understandings. In business, those understandings should be in writing and integrate the factors outlined here as well as industry specific issues. Risk managers should assess these agreements annually as business circumstances change. It should be noted that agreements do not need to be uniform across all investors. Different investors or shareholders can have varying terms incorporated into their agreements.

'What happens if' scenarios should be spelled out. Agreements should specify what happens if something happens to an investor or shareholder, if there is a dispute between them, and if there is a change in the dynamic of their relationship. Each person that is part of the agreement needs to have clearly outlined "what happens if" scenarios and solutions. These agreements help reduce animosity, clarify understanding, and avoid disputes. These contractual agreements are an effective way to assure the business relationship, as well as the personal relationship between the parties, survive and thrive.

Table 1: Formation and Financial Factors of Shareholder Agreements

Formation Factors
1. Incorporation status of the organization
i. to limit personal liability of shareholders.
2. Value of good will of business prior to adding members
i. if bringing in a shareholder, how will original owners' efforts be valuated?
3. Capital contribution and percentage of ownership
i. how much equity will each investor or shareholder contribute?
ii. what will the percentages of ownership and voting rights be?
4. Copyright, trademark of intellectual property
i. ownership of business name? Logo? Systems? Client lists?
Finance Factors
5. Personal guarantees
i. will individual investors be personally liable?
6. Additional capital if necessary; dividend reinvestment
i. if additional equity is needed, where will it be drawn from?
ii. when and how will profits be distributed?
7. Asset allocation and property contributions
i. how will ownership of assets be allocated?
ii. what if investors contribute or use their own assets to further the business?
8- Debt
i. how will debt of the business prior to adding investors be handled?
ii. how will new debt be accounted for? Based on percentages of ownership?
iii. limits on credit / credit cards (per investor)?
9. Bank account access
i. will individual investors be permitted to withdraw from accounts?
10. Profit and loss; salaries; distributions; reinvestment
i. the more specific and clearer the handling and allocation of finances, the less likelihood of disputes.
11. Financing; loans; capital investment
i. will unanimous consent be required?
12. Accounting and audit of books
i. independent audits permitted by investors or shareholders?
13. Valuation of business for estate tax purposes
i. the agreement can fix the value of a decedent's business interest.

This table shows factors that should be considered related to organization and financial issues related to shareholder agreements. (Ghinger III, 1975), (Crush, 2016)

Table 2: Operational and End of Arrangement Factors of Shareholder Agreements

Operations Factors
14. Workload, job descriptions and duties of operational investors
i. the more specific and clearer the expectations, the less likelihood of disputes;
ii. how will performance expectations be evaluated?
15. Decision making
i. who decides on personnel, improvements, maintenance, business strategy, etc.;
ii. is unanimous consent required or will each be allocated to a particular investor?
iii. can agreements be updated or revised?
16. Discounts for family and friends
i. outline in advance to avoid resentment and abuse.
17. Non-competition provision
i. can a investor or shareholder start another business? Have another job? Invest in a similar business?
ii. such provisions must be reasonable in duration and distance, and usually require legal consideration to be enforceable.
18. Admission of new investors / termination of operational investors
i. will unanimous consent be required?
19. Vacation, scheduling of operational investors
i. how will these be decided?
ii. even rotation?
End of Investor / Shareholder Agreement Factors
20. Conduct
i. actions of an investor or shareholder that may cause the immediate termination of the relationship (ex. Ethics / Morals clause in an agreement to address if a investor brings the business into public scorn due to their own actions, social media comments, or other personal decisions that reflect poorly on the business).
21. Dissolution and continuity of business
i. at-will relationship of minority operational investor?
ii. how will business move forward if shareholder wishes to redeem their stock?
22. Transition of business interest
i. identifying triggering events that specify to whom or to what a business interest shall be sold (ex. death, disability, sale to 3rd party, divorce, bankruptcy, retirement, termination for cause);
ii. outline a mechanism to determine the purchase price of that interest;
iii. right of first refusal by other investors or shareholders or by the entity itself is important to retain;
iv. may the majority investors or shareholders force minority investors or shareholders to sell their stock if a 3rd party offers to buy the business ("Drag along clause")?
23. Business valuation
i. should be done annually for tax purposes;
ii. if a investor or shareholder leaves, how will shares be valued for a buyout?
iii. how will goodwill be measured?
iv. a formula can be decided upon in advance and included in the agreement.
24. Retirement, death, disability
i. anticipating and planning for these avoids many pitfalls and disputes;
ii. consider the purchase of life insurance on the owner's life.
25. Arbitration; mediation; governing law
i. select now to minimize costs related to dispute resolution in the future;
ii. mediation and arbitration clauses help expedite resolutions to disputes and also tend to reduce costs for all parties involved in disputes.

This table shows issues that should be considered related to operational and end-of-agreement issues in shareholder agreements. (Harris, 1992), (Farber, n.d.)

We encourage businesses to examine their firm and business environment for predictable and non-predictable risks. They should identify optimal strategies to mitigate risks or consciously choose to accept the risk. When appropriate carefully drafted shareholder agreements offer another mechanism in the arsenal of risk management tools.

CONCLUSION

This article provides a primer on how effective risk management strategies attempt to foresee and manipulate future outcomes by proactively, rather than reactively, addressing variables that may adversely impact the profitability of an organization. Responses to possible risks necessitate the creation of contingencies that outline the execution of pre-determined action plans that would be triggered if the anticipated risks were, in fact, to arise. The Covid-19 pandemic has greatly impacted traditional risk management strategies in that long-term restrictions and shut-downs were mostly unforeseeable and have forced businesses into an uncharted landscape. Applying traditional risk management principles, which include avoidance, mitigation, transfer, and acceptance, help mitigate risk. In addition, many majority businesses owners have responded to the additional pandemic-related risks by recruiting shareholders and investors to reduce majority ownership percentages (partially transferring risk) and to have capital injected into the business to mitigate risk and help to ensure survival.

Future research and publication on this topic will be necessary to provide more clarity on the impact of adding shareholders and/or diluting ownership interest amidst a crisis. Candidates for future research include assessing business valuation during times of crisis, business preparedness to adjust to government mandated closures, and reductions on operations to offset anticipated losses in revenue. Future changes in insurance coverage might countervail (or further the impact of) such a crisis and return on investment for those that opted in as investors during a pandemic that threatened so many different industries and exposed these investors to significant risk.

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Review of Business & Finance Studies
Vol. 12, No. 1, 2021, pp. 79-89
ISSN: 2150-3338 (print)
ISSN: 2156-8081 (online)

IBFR
www.theIBFR.com

IMPROVING THE ACCURACY OF ESTIMATED INTRINSIC VALUE THROUGH INDUSTRY-SPECIFIC VALUATION MODELS

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ABSTRACT

This study aims to improve the accuracy of estimated intrinsic value by the industry-specific valuation model. Different industries have unique characteristics. As such, they should be valued by different valuation models. This study offers a comprehensive overview of the characteristics of financial and information technology industries and identifies the appropriate industry-specific valuation models for each industry. As the features of firms may still vary greatly even within the same industry, this study further classifies each industry into several sectors according to the Industry Classification Benchmark. After that, a series of corresponding valuation models for each sector are recommended. Detailed explanations for the recommendations are provided for each sector. This study contributes to the literature of valuation methodology by identifying the corresponding valuation models for different sectors/industries. More accurate estimation of intrinsic value can be expected as a result of more compatible valuation model.

JEL: G12, G14, C10

KEYWORDS: Industry Characteristic, Industry-Specific Valuation Method

INTRODUCTION

As a basic rule in business valuation, the selected valuation model should be compatible with the characteristics of the business being valued, to better estimate its intrinsic value. The "apples to apples" comparison offers the most defensible way to demonstrate what a business is worth. In valuation practice, equity analysts prefer to focus on general characteristics of firms within a specific industry, and then apply differing valuation models to different industries. However, equity analysts have not reached a consensus about the valuation model selection standard. In fact, they often have different valuation model preferences and choices for the same industry. Apparently, different valuation model choices produce different, and even inconsistent valuation results reducing the reliability of value estimates.

Until recently, the majority of existing studies tend to concentrate on the evaluation and comparison of valuation model performance. Few studies take into account the characteristics of industry or firm and the valuation model compatibility. This study aims to improve the accuracy of estimated intrinsic value by the industry-specific valuation model. This study offers a comprehensive overview of the characteristics of financial and information technology industries and then identifies the appropriate industry-specific valuation models for each industry. Industry-specific valuation models have good prospects in company valuation practice. They can effectively assist the equity analysts to select an appropriate valuation model based on characteristics of company being valued. More accurate estimation of intrinsic value can be expected when using a more compatible valuation model. The rest of the study is organized as follows: the literature review section provides a general overview of relevant literature. The next section discusses characteristics of financial and information technology industries, and the corresponding valuation models. Lastly, concluding comments are provided.

LITERATURE REVIEW

In today's valuation practice of listed firms, equity analysts apply different valuation models to different industries. However, existing studies rarely connect industry characteristics with the suitability of valuation models. Most theoretical works concentrate on the comparison of valuation models. Asquith et al. (2005) contrast the performance of a series of valuation models at the firm level. The models are sales, earnings, cash flow and book value-based valuation models. The authors conclude the sales-based valuation model outperforms other models in general. However, the accounting item of sales is not always a reliable value indicator since the sales figure can fluctuate extensively, especially for cyclical businesses. Other accounting items may do a better job in terms of intrinsic value measurement. Kim and Ritter (2000) argue the price to book value model is better than the price to sales and price to earning models. The authors reveal that accounting figures of sales and earnings are often volatile and easily subject to management manipulation. Although book value is indeed an ideal value indicator under certain circumstances, the valuation methodology should pay more attention to the value creation of company than anything else. Cheng and McNamara (2000) emphasize that earnings are the most important driver of intrinsic value. Other models such as price to book value model cannot be used as a primary valuation model.

Bernard (1995) further reveals that earnings are a more accurate value indicator than other indicators such as dividends, where price to earnings model outperforms the dividend yield model in general. In fact, dividend-based valuation models also generate accurate valuation result when the company being valued is a traditional and matured company with stable dividend payout policy. However, researchers often encounter companies without dividends or the dividend payout ratio is not consistent with their profitability. Gleason et al. (2013) discover the residual income model significantly outperforms other valuation models in the valuation of companies without dividend or positive cash flow.

Since the application of different valuation models into different industries is becoming the mainstream in company valuation practice, a few theoretical works have started to investigate the industry-specific valuation model. Normally, these studies are based on the observation of equity analysts' usage. Specifically, the valuation reports of listed companies and interviews with equity analysts are the major research resources. Imam et al. (2008) conducted a semi-structured interview with 42 UK sell-side equity analysts who specialized in different industries, together with a content analysis on 98 equity research reports. The authors conclude that equity analysts have their own "favorite" models for a specific industry and these "favorite" models may not be the same.

Demirakos et al. (2004) carried out a similar content analysis on 104 equity reports across three industries. The authors find the earnings-based model is the major valuation model for beverage, electronic and pharmaceutical industries. The sales-based model is also very popular. In addition, the above two studies further rank a series of absolute and relative models according to researchers' usage and preferences across different industries. However, Imam et al. (2008) and Demirakos et al. (2004) offer little reason to explain why a particular valuation model is appropriate for a specific industry. Their model ranking is mainly based on the researchers' preference and observed usage.

Liu et al. (2002) rank several valuation models based on a series of quantitative metrics. However, the authors only test the performance of several relative valuation models across nine industries. Imam et al. (2013) measure the performance of both absolute and relative valuation models at the industry level, the authors then rank the valuation models based on the accuracy of the prices produced. In general, the target price is the future price level that a listed firm's stock is likely to reach in the next 6-12 months. The target price is based on the estimated future intrinsic value. The future intrinsic value is often predicted by using the current value estimate. Thus, the target price is not the direct product of a valuation model. Rather, it contains a large percentage of subjective pricing factors. The current performance of valuation models cannot be tested via its "future" target price. In fact, it is better to test the valuation model via the "current" value estimate which is directly produced by the valuation model without any adjustments.

INDUSTRY-SPECIFIC VALUATION MODEL

Financial Industry: Commercial Banks

Commercial banks are a major player in the financial industry. It takes in deposits, offers loans and basic investment products to both personal and institutional customers. As an important financial intermediary in the economy, Dong (2008) states that commercial banks generate income mainly through the spread between the interest it pays to raise funds and the interest it charges those who borrow the funds. In addition, monopolization is a significant characteristic of commercial banks. The barrier to entry is high and it is often under strict government control in many countries. Compared to firms in other industries such as manufacturing, the fixed assets of commercial banks accounts for a low percentage of their total assets. The small capital base often causes commercial banks extremely sensitive to negative earnings. Zhang et al. (2010) indicate that although commercial banks use loan loss reserves to absorb the expected losses of loans, unexpected losses must be charged against the equity capital. Therefore, the adequacy of equity is important and commercial banks are required by regulators to maintain a reasonable capital ratio. Equities are the last protection for depositors under the extreme situation.

In the valuation of commercial banks, it is not necessary to value the total asset or whole enterprise value due to the unique role of debt in their capital structures. Damodaran (2009) states that debt should be viewed as the raw material for commercial banks to generate income. Enterprise value-based valuation models such as enterprise value to earnings before interest, tax, depreciation and amortization (EBITDA) has been ranked as the 6th valuation model choice for commercial banks by Imam et al. (2008) and Demirakos et al. (2004). Fink (2012) suggests it is appropriate to select equity-based multiples that ignore debt and uncertain cash flow, and focuses directly on the important equity capital of commercial bank. The author regards the current book value of commercial bank as a reliable starting point and recommends the price to book multiple as a primary valuation model. In addition, Wild et al. (2001) further pointed out that as a measure of net asset value, book value is appropriate for valuing the commercial bank which is composed chiefly of marketable financial assets, since their book values may approximate their current market values. Damodaran (2009) states that accounting rules which govern bank accounting have historically been different from the accounting rules for firms in other industries. Banks have a "mark-to-market" accounting standard and book value is a surprisingly reliable indicator of current value (Fink, 2012). Although mispricing of financial asset may exist, the current market price is still a good proxy of current value.

Imam et al. (2008) rank the price to book as the number one valuation model for the financial industry, and the price to earnings as the second model of choice. However, other studies argue that price to earnings may not be a suitable valuation model for commercial banks. Dong (2008) states that significant earnings fluctuation of the cyclical commercial bank may reduce the effectiveness of price to earnings multiples, since the performance of a commercial bank is over-sensitive to interest rate changes. The author further indicates that volatile earnings is not a reliable indicator of the true performance of a commercial bank. Stable book value is more meaningful when earnings are abnormally high or low. Besides, the loan loss reserve is an important protection measure for commercial banks against the expected loan losses. The loss reserve has been recognized as an expense in the income statement, and thus the amount of reserve is negatively related to the earnings of a commercial bank. Zhang et al. (2010) find that different banks have different attitudes toward credit risk. The more conservative the commercial bank is, the higher the level of reserves and thus the lower earnings level. Therefore, earnings cannot reflect the true performance of a commercial bank. On the other hand, book value is less sensitive to the level of loan loss reserve. The equity analysts should focus on price to book while reducing the usage of price to earnings in the valuation of commercial bank. In addition, the residual income model is also a popular valuation model especially when the commercial bank being valued has negative earnings, no dividend payment or negative cash flow.

Financial Industry: Insurance

In many studies, insurance is defined as the equitable transfer of risk of loss, from one entity to another in exchange for payment. As a special type of institute in the financial industry which provides economic protection against the identified risks occurring or discovered within a specified period, Damodaran (2009) indicates that the insurance firm offers either life or nonlife insurance and earns income via insurance policy underwriting and investment. Insurance firms derive their profit from the spread between the return on invested assets and the claims paid to its policy holders. Nissim (2013) states that in the valuation of insurance firms, valuation models such as discounted cash flow, which focuses on operating activities, omits a major part of value creation (investment). In addition, cash flows from the investment portfolio and insurance operation are subject to great uncertainty. Therefore, the cash flow-based model of discounted cash flow (DCF) cannot be a primary valuation model. The DCF model has been ranked as the 4th valuation model of choice for insurance firms by Imam et al. (2008) and Demirakos et al. (2004). The free cash flow to firm model is even worse than the free cash to equity, since the definition of debt is unclear and its role is special. In addition, dividend-based models such discounted dividend model and dividend yield slightly outperform the DCF model. The dividend is easier to estimate than free cash flow, especially under the condition that the insurance firm being valued has established a long-term dividend policy that bears an understandable and consistent relationship with the company's profitability (Pinto et al., 2020). In addition to cash dividends, stock buybacks are also a common way for the large and mature insurance firms to return cash to their shareholders. Damodaran (2009) suggests adding the stock buybacks each year to the dividends paid and compute the composite payout ratio.

With regard to the valuation of insurance firms in developed countries, Dong (2008) states that equity analysts often focus directly on the equity value. Similar to commercial banks, the book values of insurance firms are solid measures of most balance sheet items. The major assets and liabilities of insurance firms are highly liquid and often close to their fair values. Nissim (2013) further indicates that insurance firms are required by regulations to maintain minimum equity. These regulations affect the value of the insurance firms and make the book equity a relatively useful measure of the scale of operations. In addition, Nissim (2013) examines the accuracy of a series of relative models in the valuation of U.S. insurance firms. The book value multiples performed significantly better than earnings-based multiples. However, unlike other firms in the financial industry such as commercial banks, the earnings of insurance firms tend to be stable and less subject to the business cycle effect. Thus, the earnings-based multiple is also a popular choice. Although price to book outperforms price to earnings in the valuation of insurance firm, the gap between their valuation performances is not significant if the earnings are based on forecasted figures (Nissim, 2013). Therefore, the price to earnings has been ranked as the 2nd choice model for insurance firm by Imam et al. (2008) and Demirakos et al. (2004).

Traditional valuation models often underestimate the value of life insurance companies with a high growth perspective. Hence in recent valuation practice of insurance companies in emerging markets, a unique appraisal value model derived from the actuarial science has gained its popularity. Dong (2008) states that the appraisal value model measures the intrinsic value as sum of embedded value and the present value of future new business, where the embedded value equal to the adjusted net worth plus the value of in-force business. Although the appraisal value model is complicated and has not been widely used by equity analysts, it is ideal for the strong growth life insurance firm since it considers the values from net asset, existing business and new business at the same time.

Financial Industry: Securities

Securities companies, also known as investment banks or brokerage houses offer securities brokerage, investment banking and asset management services, and actively participate in proprietary trading. Unlike commercial banks and insurance companies, most securities companies have large positive betas and their performances are closely correlated to the movement of stock market. The stock performance of securities companies has often been regarded as the most direct and sensitive indictor of the overall stock market movement. In addition, securities companies often conduct valuation assignment on both public and private companies. Most literature tends to concentrate on how securities companies value other firms, not on how to value themselves. This section attempts to fill the gap and provide a better understanding of the specific models for the valuation of securities companies.

First consider securities companies which lack adequate diversification and concentrate on a risky business such as proprietary stock trading to generate revenues. Their risks are significant and their earnings are extremely sensitive to investment decisions and the stock market condition. Their volatile and uncertain earnings are not a good performance indicator. The earning-based valuation model is not suitable for these securities companies. Further, similar to commercial banks and insurance companies, securities companies are also required by regulators to maintain minimum loss reserve for their proprietary trading. Their loss reserves are recognized as expenses in their income statements and may cause their earnings not to be comparable. The reserves for different securities companies is subject to different business structures and specific regulatory requirements. Securities companies which lack diversification and earnings protection measures often produce higher loss reserves. The when valuing securities companies which rely heavily on proprietary stock trading to generate profit, the price to book multiple is preferred over the price to earnings approach. Given the uncertainty of stock markets, the future performance and cash flows of securities companies are difficult to forecast. The absolute valuation models such as DCF and DDM are not suitable.

Second, consider securities companies which focus on low-risk brokerage, investment banking and asset management services. Their profitability tends to be stable and less subjective to the movement of the stock market. Therefore, Zhang et al. (2010) indicates that earnings are a chief driver of intrinsic value. The price to earnings approach is the primary valuation model for mature securities companies that operate in stable businesses. Third, the recent consolidation and diversification caused many securities companies to gradually abandon the single business structure and operate in multiple businesses. They start to focus on the defensive investment banking business and securities asset management business to enhance their earning quality and gain higher valuation premium.

However, in the valuation of securities companies with strong growth perspectives, value estimates generated by traditional valuation models such as price to earnings multiples tend to be volatile. Besides, trailing earrings cannot reflect the potential risk and investment gain the company may have in the future. Therefore, the true value of growing securities companies may be severely underestimated. Imam et al. (2008) emphasize the importance of earning growth rates in the valuation of a growing company. The authors recommend the PEG (P/E to Earnings) as an alternative valuation model as it considers both price to earnings and earnings growth rate in the next 3 to 5 years.

Table 1: Recommended Valuation Models - Financial Industry

Sector	Recommended Valuation Models
Commercial Banks	Price to book value model, Price to earnings model, Residual income model
Insurance	Price to book value model, Price to earnings model, Appraisal value model
Securities	Price to book value model, Price to earnings model, Price/Earnings to growth model

Source: Own resource

Information Technology Industry: Software & Computer Services

The software & computer services sector is a category of IT firms that related to the research, development and distribution of information technology-based products and consultancy services. software & computer services firms are intangible-rich where many firms derive most of their value from intangible assets such as technology. Therefore, the core technology of a software & computer services firms plays an important role in its business model, and the "technology value" generated from the core technology accounts for a large percent of the firm's total intrinsic value. Software & computer services firms typically specialized in the development of one particular group of related products. Their core technologies are usually unique and thus cannot be compared to other technologies. Thornton et al. (2011) states that relative valuation models which compare the subjective company with its peers do not have significant advantage over the absolute valuation models for the software & computer services sector. Pinto et al. (2020) also indicate that in the valuation of a high growth industry with great uncertainty, equity analysts devote little space to accounting. Accrual based relative valuation models are only appropriate for more stable industries. Demirakos (2004) also argues that accounting measures of performance are less relevant for intangibles-rich firms or for firms with large portfolios of growth opportunities.

Regarding valuation model choices, Zhang et al. (2010) indicate that software & computer services firms do not require enormous capital investment in tangible assets such as the infrastructure. Their intangible assets such as goodwill, patent, technology, software and human resources may account a large percentage of total assets. However, current accounting rules impose the limitation of non-recognition of self-generated intangibles. In addition, since the products of research are subject to great uncertainty and are difficult to quantify, accounting rules generally require that all R&D investments be expensed in the period where they occur. Damodaran (2009) criticizes current accounting rules as mistreating R&D investment and causes both capital expense and book values to be understated. In fact, investment in R&D should be capitalized and recorded as an asset. Therefore, the value of intangible assets is difficult to be fully measured by the book value, and this reduces the effectiveness of book value as a reliable value indicator. Besides, book value also cannot take into account the value generated from future growth. Therefore, book value-based valuation models such as the price to book value and enterprise value to book value models have been ranked as the most unsuitable models for the software & computer services sector by Demirakos et al. (2004) and Imam et al. (2008).

The valuation model should be more forward-looking and take into account both high earnings growth and uncertainty in the future. Since the cash flow is generally more stable than earnings and less subject to manipulation by management, sophisticated DCF valuation models which estimate the intrinsic value as the present value of future cash flow have been regarded as the most appropriate choices for software & computer services firms. However, the valuation model selection varies greatly across the different company life stages (start-up, growth and mature) of software & computer services firms. The following sections analyze the characteristics of firms within three life stages respectively, and then introduce their corresponding valuation models.

For consider small start-up firms which account for a large percentage of the total firms within the software & computer services sector. Most of these firms are non-listed. They have a short operating history and limited accounting data. Therefore, their valuations must be made under many assumptions. Further, many adjustments are also required when the public business valuation techniques are adopted in the valuation of private firm in the early stage. Since many start-up firms do not have comparable listed firms, their market capitalizations or market prices are usually estimated by the comparable transaction method.

With regard to valuation models for small software & computer services firms, Thornton et al. (2011) state that many firms are still in the technology R&D stage and they have little revenues. Their future earnings and growth rates are also difficult to estimate due to the absence of adequate accounting records. In addition, the mis-categorization of R&D investment as an operating expense can result in understating earnings. Therefore, the historical earnings based-valuation models such as trailing market capitalization to earnings (trailing P/E), and future earnings-based models such as the forward market capitalization to earnings (forward P/E) are meaningless. As most firms do not have a profit yet, dividend payout is impossible for them and the dividend-based valuation model such as the discounted dividend and dividend yield are both not suitable. Software & computer services firms have great uncertainty in their early stages, Zhang et al. (2010) indicated the modified discounted cash flow model (MDCF), which weighs several uncertain elements to arrive at the end valuation, is the most suitable valuation model. Unlike the traditional discounted cash flow model where a single (most-likely) scenario is used, the MDCF is a type of risk-adjusted net present value model. It considers several possible scenarios for the start-up firm and assessing the probability of each scenario.

Second, as the R&D process continues and firms move into the growth stage, the certainty of success and of receiving the anticipated cash flows increases substantially, resulting in a corresponding increase in the company's value (Robin et al., 2009). At this stage, the earnings of firms turn into positive figures and become less volatile than before. Thus, the earning becomes a chief and reliable value driver. Zhang et al. (2010) highlight the importance of both current earnings and future earnings growth rates in the valuation of growth software & computer services firms. The authors recommend the price/earnings to growth model (PEG) as a superior alternative model over the price/earnings (P/E). The traditional P/E model is unable to take into account the firm's high growth perspective in the future, the PEG provides an effective solution to overcome this deficiency. In addition, the growing software & computer services firms require continuing capital injection to advance their R&D progress of technology product. They adopt a variety of ways to finance growth. This causes their capital structure to vary significantly. Pinto et al. (2020) recommend the enterprise value to EBITDA as a more appropriate model than P/E for comparing companies with different financial leverage. The EBITDA is pre-interest earnings and the EPS is post-interest, the enterprise value only considers the total value of equity and debt, and disregards the capital structure difference.

Third, after firms finish the R&D process of their core technology and product, the technology uncertainty and overall business risk is reduced sharply. Therefore, unlike small start-up firms, the importance of the modified discounted cash flow model declines significantly. There is no point to considering many possible scenarios in the stable stage, especially for the mature software & computer services firms with minimal uncertainty. Hence, the traditional DCF model gains popularity. Demirakos et al. (2004) and Imam et al. (2008) rank the DCF model as the top valuation model for mature IT companies with stable and sustainable cash flow. In addition, compared to early-stage firms with strong growth perspective and volatile earnings, the mature software & computer services firms have limited reinvestment opportunities. Most of their technology investments generate a return on invested capital just exceeding their cost of capital. Earnings tend to be stable and easy to predict, thus earnings-based models such as the price to earnings is a popular valuation model for matured firms without profitable reinvestment projects. Matured firms with large retained earnings balances but few reinvestment opportunities tend to distribute their retained earnings to their shareholders through cash dividend and share buyback. Pinto et al. (2020) states that dividend-based models such as the discounted dividend and dividend yield are appropriate for dividend-paying firms that have an understandable and consistent relationship with their profitability. Dividend-based models are appropriate for matured firms which have already established sustainable dividend policy.

Information Technology Industry: Technology Hardware

Unlike the emerging software & computer services sector which attract investors' attention in recent years, the technology hardware sector is a "traditional" but still very important part of the information technology industry. Software & computer services firms rely heavily on the technology hardware. Company-wide networks and the internet itself only work because of a huge backbone of servers. Therefore, technology hardware firms still receive a fair amount of equity analyst attention. In general, the technology hardware sector includes firms which develop, manufacture and distribute a variety of technology hardware such as, communication and medical equipment, computers, technical instruments, industrial and consumer electronics. Technology hardware firms spread widely along the industry chain. The products vary greatly for firms located at the upstream and downstream of the industry chain. Upstream technology hardware firms specialize in the business to business (B2B) products of electrical parts, integrated circuits, computer chip and accessories. Downstream firms manufacture a range of final technology products directly for the consumers.

Product differences cause the characteristics of firms to vary greatly. This section classifies technology hardware firms into the two categories. The first category is capital-intensive business which includes the upstream firms of electrical parts and accessories manufacturers, and the downstream firms without strong R&D capability. The second category is the capital and technology-intensive business which contains the upstream firms of integrated circuits and computer chip manufacturers. This category also includes downstream producers of the final product. The Porter's Five Forces theory is adopted to analyze the characteristics of technology hardware firms, then a series of corresponding valuation models are recommended.

For the capital-intensive business such as the manufacturers of electrical parts and accessories, a high threat of new entrants exists. Their low barrier to entry significantly increases competition and reduce their overall profitability. Zhang et al. (2010) point out the major reason for their low entry barrier is because these firms only require relatively large initial investment in manufacturing facilities. There is little need for a higher level of proprietary technology and patents. In addition, Dong (2008) indicates the low switching cost of products such as electrical parts and accessories significantly increases the customer bargaining power further decreasing their profitability. For electrical parts products such as resistors, capacitors and diodes, manufacturers must meet certain industry standards and thus have good product compatibility with many downstream electronic products.

Similar to electrical parts, hardware accessories must be compatible with the final products. Therefore, the product difference is not huge. The threat of substitutes is high since there are many similar products available in the market. Zhang et al. (2010) recommend the price to book value model (P/B) as an appropriate valuation model of choice for manufacturing firms with the following features: a large amount of fixed assets, relatively stable book value, low return on assets and rampant rivalry with peers. Although book value is often used as a value indicator for the firms in the case of discontinued operations, Pinto et al. (2020) state that book value is also appropriate for the firms without strong growth prospects and less uncertainty in the future. In addition to book value, sales-based models such as price to sales (P/S) and enterprise value to sales (EV/S) are also suitable valuation models for the manufacturing businesses, since their revenues are subject to less uncertainty, distortion and are easy to predict. The EV/S model is capable of distinguishing between undervalued companies and debt-burdened companies, since enterprise value disregards the capital structure difference. Most capital-intensive businesses such as electrical parts and accessories manufacturers often struggle with low profitability. Many firms over-rely on debt to finance their operations. Since manufacturing firms usually have substantial depreciation and amortization expenses to depress their earnings, Pinto et al. (2020) suggest that EBITDA controls for differences in depreciation and amortization among businesses. The enterprise value to EBITDA (EV/EBITDA) is frequently used in the valuation of manufacturing businesses with little goodwill, negative net income but positive gross profit.

Second, capital and technology-intensive businesses have significantly different features. Most of their products are highly complex and require a large amount of intelligence and funds input. In general, capital and technology-intensive businesses such as integrated circuits and computer chip manufacturers have exceptionally high barriers to entry to preserve their profitability. Wang et al. (2007) indicates that integrated circuits and computer chip manufacturers have high possibility of failure. They often require large initial capital and knowledge investment. Hence, the cash flow-based valuation model such as discounted cash flow model (DCF) and price to cash flow (PCF) are the primary choices for the fast-growing firms with volatile earnings and large risk.

Capital and technology-intensive firms have considerable property, plant and equipment (PPE) related fixed cost and R&D expense in the early stages. But, they have low production-related variable expenses in the later stages as result of the economies of scale. Besides, the moderately high switching cost forces most downstream firms to stay with their existing upstream suppliers of integrated circuits and computer chip product. They are less inclined to pay for the high switching cost unless there is a large technology improvement (Wang et al., 2007). The sales-based multiples of price to sales (P/S) and enterprise value to sales (EV/S) are both appropriate valuation models for the firms with stable revenue. In addition to the huge amount of tangible assets such as PPE, capital and technology-intensive businesses also have a large amount of intangible assets such as goodwill and intelligence properties. Therefore, Zhang et al. (2010) indicate the price to book value model (P/B) is not a good choice for firms with a large proportion of intangible assets. Book value cannot take into account value generated from fast growth in the future. The authors further recommend the price/earnings to growth model (PEG) as a superior alternative for taking into account firms' high growth perspective in the future.

After the capital and technology-intensive hardware stage, manufacturers finish their R&D process and move into the production stage. Their profitability usually increases sharply until the mature stage. In the mature stage, their earnings tend to be stable and many firms have a large amount of retained earnings. Dong (2008) indicates the earnings-based model of price to earnings (P/E) becomes the major model choice for firms with mature and stable earnings. The importance of dividend yield (DY) and discounted dividend model (DDM) also increases as many firms start to distribute their earnings.

Table 2: Recommended Valuation Models - Information Technology Industry

Sector	Recomendad Valuation Models
S&C Services	Discounted free cash flow model, Price/Earnings to growth model, Enterprise value to EBITDA model
Technology Hardware	Price to book value model, Enterprise value to sales model, Discounted dividend model

Source: Own resource

CONCLUDING COMMENTS

This study aims to improve the accuracy of estimated intrinsic values by industry-specific valuation models. This study offers a comprehensive overview of the characteristics of financial and information technology industries, and then identifies appropriate industry-specific valuation models for each industry. In particular, this study focuses on a range of commonly used valuation models including multi-period absolute models and single-period relative models. Since the features of firms may still vary greatly even within the same industry, this study further classifies each industry into several sectors according to the Industry Classification Benchmark. After that, a series of corresponding valuation models for each sector are recommended, detailed explanations for recommendation are given for each sector.

This study contributes to the literature of valuation methodology by identifying the appropriate valuation models for different sectors/industries. More accurate estimation of intrinsic value can be expected as a result of industry-specific valuation models. Industry-specific valuation models have good prospects in company valuation practices. They can effectively assist the equity analysts to select the appropriate valuation model based on characteristics of the company being valued. However, this study has a limitation that only two industries are included. Further studies on other industries and their corresponding valuation models are necessary and meaningful.

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