DETERMINING THE SOUTH AFRICAN PERSONAL FINANCE ECOSYSTEM THROUGH A LIVING LAB APPROACH

INAUGURAL LECTURE

Prof Bernadene de Clercq

University of South Africa (UNISA),
Pretoria,
South Africa
dclerb@unisa.ac.za

Wednesday, 11 May 2022

Senate

- Professor SR Mogano, Acting Vice-Principal, Teaching Learning, Community Engagement and Student Support;
- Doctor MT Hlongoane, Acting Executive Dean, College of Accounting Sciences;
- Professor AP Swanepoel, the Acting Chair of Department of Taxation, College of Accounting Sciences;
- Colleagues from the College of Accounting Sciences, the broader Unisa community and other institutions;
- Friends, associates and family members;
- Distinguished guests, ladies and gentlemen.

I wish to greet and welcome you all to this inaugural lecture. I am deeply humbled by your attendance of today's occasion which marks my formal acceptance to the professorial ranks. I am also sincerely grateful for Unisa's recognition of my scholarship. Looking back at my 20-years at Unisa, it is with great appreciation that I want to thank several individuals that have made a huge impact on both my professional career and my personal life. However, before I start acknowledging these individuals, I firstly want to thank my Heavenly Father for the grace and blessings He has bestowed on me to be standing here today – all glory goes to Him.

If time allowed, I would have liked to use this opportunity to acknowledge all the individuals who have played a significant part in my research career; however, not wanting to keep you here until morning, please allow me to acknowledge just a few:

- Firstly, I wish to acknowledge my husband, Anton de Clercq, for being my best friend and greatest fan over the last thirty years – thank you for believing in me and supporting and loving me through this journey;
- My two sons, Gerhard and Joubert de Clercq, I am so proud of the young men you have become and thank you for your patience, love and support;
- My parents, Hennie and Marie Joubert, and Gert and Elize de Clercq, for your unwavering support and love;
- Prof Carel van Aardt, Mr Johann van Tonder, Ms Jacolize Meiring, Dr Marthi Pohl and the late Prof Jan Venter for your invaluable contributions towards my research career;
- My academic mentor, Dr Charmaine Williamson, for all those “Charmaine moments”;
- My international co-researchers, Prof Andy Lymer, Prof Carmela Aprea and Prof Adrian Sawyer;
- My colleagues from the Department of Taxation and the College of Accounting Sciences for supporting all my endeavours over the years – I know I can be quite a handful, but I truly appreciate your support;
- My colleagues from Momentum and the Momentum Metropolitan Foundation for the very rewarding and inspiring collaboration; and lastly but not least
- My postgraduate students – I have learned immensely from all of you.

I am looking forward to share with you an overview of my stewardship up to the present but also to provide a sneak preview of the next phase of my research journey in this inaugural lecture, entitled: **Determining the personal finance ecosystem through a living lab approach**.

The financial services sector is at the heart of the South African economy and touches the life of each and every citizen. Financial services allow people to make daily economic transactions, save and preserve wealth to meet future aspirations and retirement needs, and insure against personal disaster.[1]

1. INTRODUCTION

As a young academic, coming from an accounting practice, my research journey started with a huge deficit in terms of formal research exposure, and being involved in research was not something the accounting fraternity was known for. However, my colleague and friend, the late Prof Jan Venter and I decided that we would take on this new challenge, but as true accountants, we needed a checklist or standard against which to measure or evaluate the research. We therefore organised a training workshop with our colleagues from the Bureau of Market Research. Prof Carel van Aardt and Prof Deon Tustin kindly agreed to assist our department in developing some research skills and through that intervention, I produced my first research outcome in 2007, focusing on some of the tax compliance burdens or barriers small business owners face. Through this introduction to research, I became exposed to a world unbeknown to me as our training, up to that point, was highly discipline orientated – that is, very technical with no exposure to the world of research. Although my first steps in research were focused on tax compliance, my qualification as a certified financial planner coupled with my chartered accountancy degrees, led me to embark on a long-standing multidisciplinary research journey focused on personal finance contributing to economic and financial well-being. For the purposes of this presentation, I have named it the multi-disciplinary research agenda.

1.1. Components of the multidisciplinary research agenda

Personal finance, also referred to as consumer finance, has been defined by Xiao and Tao (2021:3) as a research field that studies

> "how financial institutions provide products and services to meet financial needs of consumers, how consumers make financial decisions, how government agencies regulate financial institutions and protect financial consumers and how science and technology help optimize the efficiency of consumer finance markets and improve social welfare".

[1] A safer financial sector to serve South Africa better 2011 (NT 2011:1)

According to the same authors as well as Tufano (2009), the scope of consumer finance includes money management, which includes payments and the evolution of payment systems, managing risk, borrowing and credit, saving and investing as well as financial decision making. It furthermore also covers topics broader than the traditional financial functions which includes topics such as fintech, financial capability, demographics, family relations and human development. This multidisciplinary domain therefore focuses on societal welfare that includes multiple interest groups such as businesses, consumers, governments and other social organisations as advocated from an economist perspective. Business or accounting researchers are concerned about the interest of shareholders of businesses compared to consumer science researchers who are interested in the well-being of consumers. I find myself somewhere in between these various perspectives.

Consumers are required to make sound financial decisions and manage their finances in an increasing complex and diverse financial system, resulting in more emphasis on mechanisms to empower consumers. These initiatives include national financial education strategies, legislation to ensure better consumer protection, data collection efforts to gauge the state of consumers' and households' financial health as well as a host of financial education programmes to empower consumers to develop the necessary knowledge, skills and positive behaviours. The support is provided across a spectrum of stakeholders, which traditionally include governments, private sector institutions and not-for-profit organisations. This also holds true for South Africa, as at a national level, several government institutions are focused on the state of consumer finance. For example, National Treasury is in the process of updating the 2013 National Strategy on Financial Education and they have also been reforming the retirement environment since 2012 through tax and other legislation. Governance and oversight of the financial sector have also been refined with the introduction of the Twin Peaks model which resulted in new legislation such as the Financial Sector Regulation Act and the Conduct of Financial Institutions (COFI) Bill. From a consumer protection perspective, the Protection of Personal Information Act came into play in July 2021 and the Financial Sector Conduct Authority (FSCA) is in the process of drafting standards for financial education to support the Financial Sector Transformation Code in order to have a transformed society. The private sector is investing in empowerment programmes which allow non-for-profit organisations to reach as many consumers as possible. In an attempt to ensure better collaboration between all stakeholders in this very defragmented environment, National Treasury spearheaded the establishment of the National Consumer Financial Education Committee (NCFEC) in 2012. As a multi-stakeholder committee, NCFEC was established to secure the active involvement, collaboration and coordination of a range of stakeholders in consumer financial education.

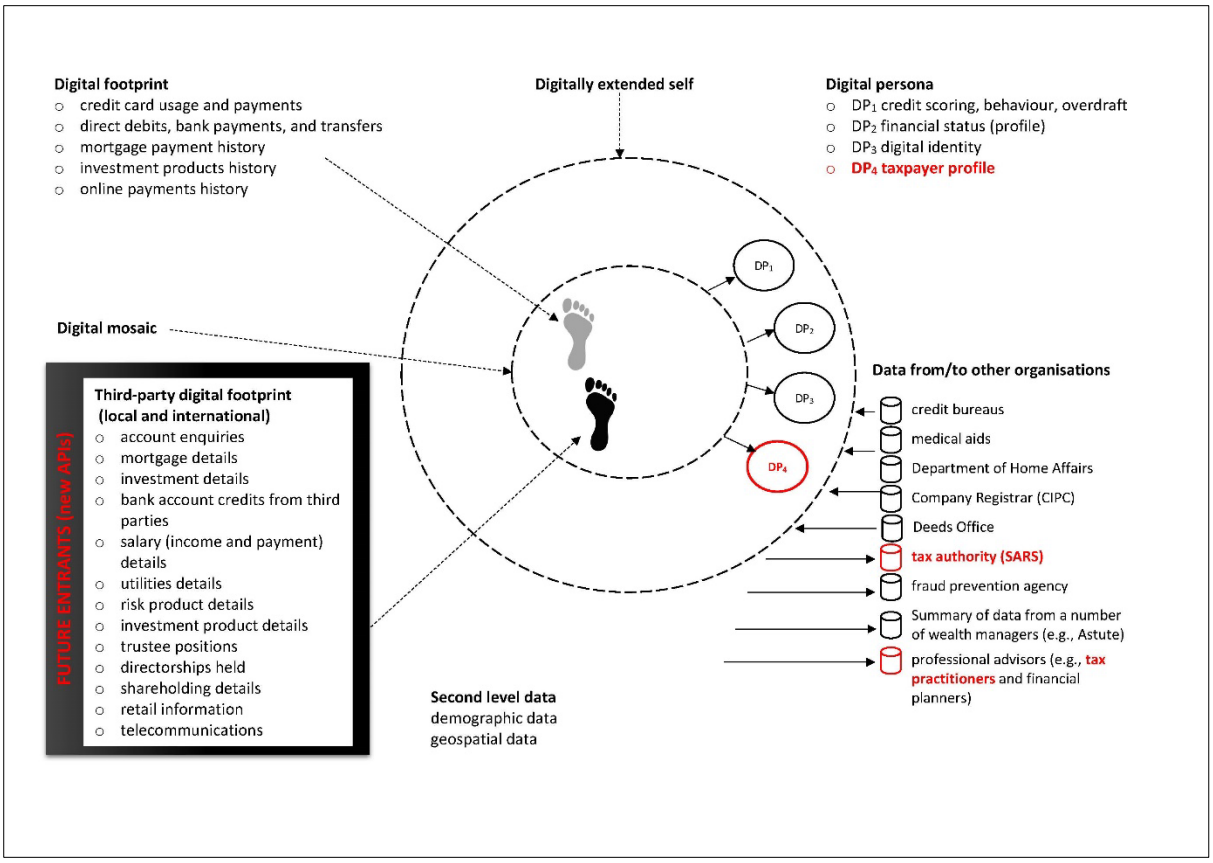
The Committee is chaired by National Treasury and comprises representatives of the financial sector industry, government departments, regulators, academia, and other civil society organisations. The mandate of the committee amongst others, includes: to develop and update the national consumer financial education strategy; to oversee its implementation; and to provide leadership and guidance in the planning, coordination, implementation, monitoring and evaluation of consumer financial education programmes. I will return to the NCFEC and its constituents later on. All these considerations that I have named above are about being financially active in a modern world, which inevitably means that technology has to both drive and inform how people navigate these various dimensions. Technology and its innovations have thus become central to this field – also referred to in the description of the field of consumer finance.

1.2. Multidisciplinarity and technology

Technological innovation in financial services and tax administration have resulted in an increase in user interfaces and enriched client experiences, as well as similar interfaces making the financial and tax worlds highly interconnected. To illustrate the challenge and opportunity of interconnectedness, Parkinson, Millard, O'Hara and Giordana (2018) developed a novel concept, called the "digitally extended self" model that illustrates the complexity and scale of the data generated by an individual's digital interactions that makes for higher levels of interconnectedness but also raises the issue of the protection of personal information. Their model consists of five concepts:

(i) a digital footprint, that is data descriptive of an individual laid down as a result of his/her using, or being observed by, computing devices;
(ii) a third-party digital footprint, that is, digital footprints created by an individual or computer system that are descriptive of another individual (the data subject);
(iii) a digital mosaic, that is, a collection of digital footprints that can be used to create a picture of a person (a simple digital mosaic consists of a person's own digital footprints, whereas a full digital mosaic includes the collection of both an individual's own and third-party digital footprints);
(iv) a digital persona, that is, a model of an individual created by analysing his/her digital footprints and/or other digital personas, and (optionally) additional second-level data; and
(v) a digitally extended self, that is, the combination of the above elements, to provide the fullest possible digital representation of an individual.

As an example of the interconnectedness between the tax and financial services to create a "digitally extended self", a brief overview from a wealth management perspective is provided. Revenue authorities routinely collect financial data at levels (i) and (ii). Figure 1 portrays the various data sources generated in the financial services of the digitally extended self from a wealth management perspective. It is a much richer picture, and of greatest relevance to revenue administrations is its ability to generate most of what is needed for preparing and calculating personal tax but also allows financial advisors to develop a comprehensive financial plan.



API = application programming interface, CIPC = Companies and Intellectual Property Commission, SARS = South African Revenue Service.
Note: Although this figure refers to South African institutions, their functions are globally applicable and relevant.
Source: Adapted from Parkinson B., Millard, D. E. , O'Hara, K. and Giordano, R. 2018. The Digitally Extended Self: A Lexicological Analysis of Personal Data. *Journal of Information Science* 44(4): 552–565.

FIGURE 1: Digitally Extended Self from a Wealth Management Perspective
(Source: Granger, De Clercq & Lymer, 2021)

It is therefore clear from this brief introduction and multidisciplinary overview that there are a myriad of stakeholders involved in personal finance ranging from government, technology, to grass root levels.

2. A QUADRUPLE HELIX MODEL

Returning to my research endeavours that have resulted in this event today, I will further expand on some of my own contributions in the personal finance domain. Initially, it is necessary to note that personal finance is situated in a complex system that has many dimensions and layers. In order to gain a better understanding of this interrelatedness between the various systems in the personal finance domain, my academic identity is substantively positioned within a quadruple helix model, inclusive of civic engagement and knowledge-based societies. I therefore believe that in order to assist consumers in achieving higher levels of financial and economic well-being, a collective effort among key stakeholders is needed. These include: government (represented by policymakers and regulators) with its citizens; the financial services industry (including industry representative bodies) with its consumers; and academia (inclusive of civil society/community engagement) with its constituents. Such systemic collaboration, beyond the financial sector, is indicated in figure 2. These issues are now addressed in the next section.

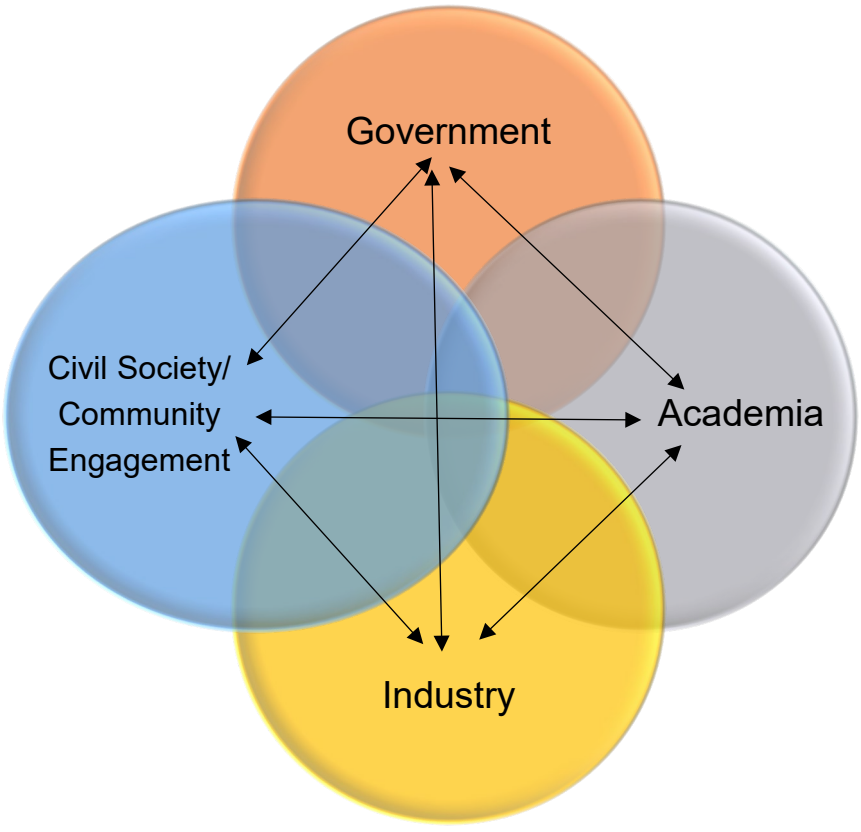


FIGURE 2: Quadruple helix model of collaboration
(Source: Author's own)

3. THE MOMENTUM/UNISA HOUSEHOLD FINANCIAL WELLNESS INDEX

As an example of successful collaboration at the Academia ↔ Industry level, I would like to take this opportunity to briefly introduce you to the Momentum/Unisa Household Financial Wellness Index project. For the majority of you, this is hopefully not a new introduction but a reintroduction to an old friend as our project has been running since 2011.

3.1. A multidimensional measurement of economic and financial wellbeing

Across several disciplines, there has been a move away from GDP as the only key indicator of national progress and well-being towards a more holistic review of national progress and well-being. The Organisation for Economic Co-operation and Development's (OECD) Better Life Index is a case-in-point. The Better Life Index combines a wide variety of metrics from the economy, to housing and health (see Eker & Ilmola-Sheppard, 2020 for a more detailed discussion). In line with the international move towards a multidimensional measure for national progress and well-being, I have been involved in the Momentum/Unisa Household Financial Wellness project since its inception in 2011 with it becoming a niche area of focus within my academic identity. The financial wellness survey was conceptualised by myself, two colleagues and a PhD student during my secondment to the Bureau of Market Research, where I was tasked to establish the Personal Finance Research Unit to create a research-intensive environment for the then School of Accounting Sciences. In line with the multidimensional thinking, we recognise that individuals and households are complex structures influenced by various events and influences and therefore, we define financial wellness:

> "As a multidimensional positive state characterised by a high quality of life and a sense of personal wellness" (De Clercq, Van Aardt, Venter & Van Tonder, 2011:6).

We therefore conceptualised the multidimensional financial wellness construct as a five capital model as indicated in figure 3.

FIGURE 3: Financial Wellness Five Capital Model
(Source: De Clercq, Van Aardt, Venter & Van Tonder, 2011)

The five capitals refer to the following:

- **Physical capital** represents the income statement of the household as determined by the state of income and expenditure.
- **Asset capital** refers to the net wealth position of the household. Net wealth is determined through the compilation of a household balance sheet and determined by subtracting the households' liabilities from their assets.
- **Environment capital** reflects the living conditions of the households determined by their home ownership status and the quality of the dwelling.
- **Social capital** (also referred to as personal empowerment) is determined by factors affecting the control over their financial situation and the trust in the institutions that they are dependable on.
- **Human capital** is determined by the household members' qualifications and skills levels.

The Financial Wellness survey is currently in its 11th wave, collecting distributional economic and financial well-being indicators amongst approximately 2 500 nationally representative households annually. During our first wave of data collection, we were approached by Momentum Ltd to collaborate on this project as financial wellness was also a key focus for them. Based on the collaboration with Momentum, in additional to the distributional

economic and financial well-being indicators, the Momentum/Unisa Household Financial Wellness Index has been developed and published since 2012.

As indicated in figure 4, our latest report on the state of South African households' financial wellness (released November 2021), indicated that:

- South African households' overall Financial Wellness score recorded a steep decline from 68.7 points in 2018 (similar to the estimated level in 2019) to 65.2 points in 2020, thus compared to the previous year when we could do fieldwork (i.e. 2018), it reflects a significant drop in the overall index score.
- The general decline in the household Financial Wellness component scores was driven mainly by the impact of the COVID-19 pandemic and lockdowns.
- It is also evident that there was a larger adverse impact on households' income and personal empowerment levels opposed to their wealth, living conditions and education components.
- The inability to earn sufficient income, or a loss of income to finance debt and/or to spend on consumption gave rise to a sense of low personal empowerment where households felt that they had less control over their finances with less ability to solve problems due to, among others, strict lockdown regulations.

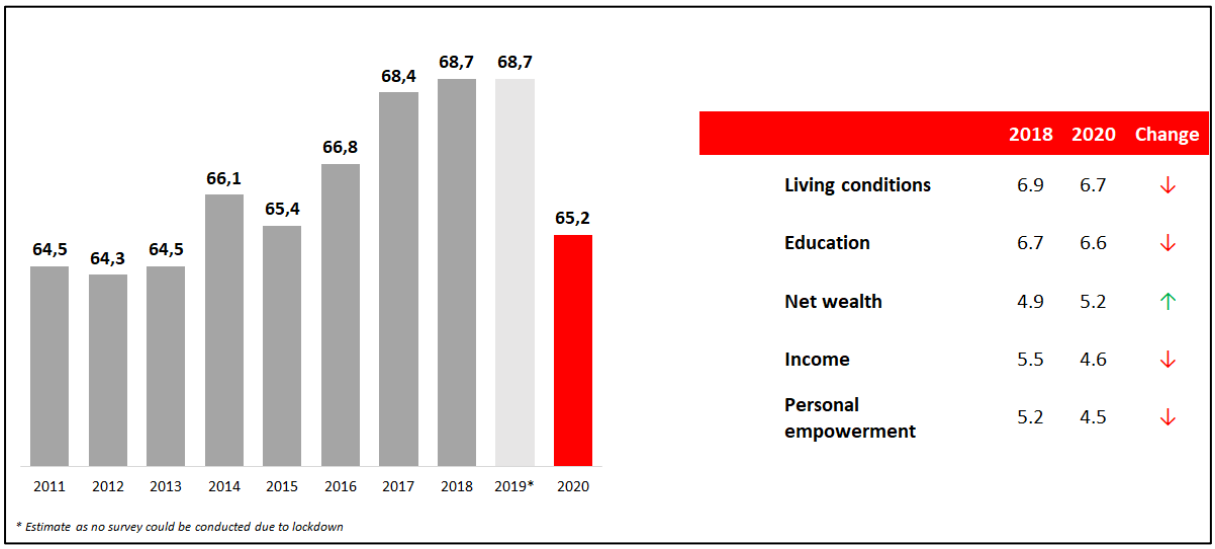


FIGURE 4: 2020 Financial Wellness Scores

(Source: Meiring, De Clercq, Van Tonder, Van Aardt, Risenga & Poalses, 2021).

For those of you who do know me, in terms of a subjectivity statement following Priessle (2008), the lived realities of groups, experiencing financial challenges, as well as those who fall in the highly vulnerable group, would keep me awake at night as a human being, let alone as a researcher who has the opportunity to build evidence for scholarship, policy and the applied domains. Hence my on-going work within these focal areas, as this presentation will further expand.

3.2. Household net wealth (asset capital)

As another example of my influence in the quadruple helix model expanding from the Academia ↔ Industry level to include the Academia ↔ Government level, allow me the opportunity to focus on one of the five Financial Wellness capitals, namely asset capital or the household net wealth indicator as populated by distributional household balance sheets. Households' net wealth is also a key indicator of the financial well-being of a country's citizens and a focus on distributional household wealth statistics is thus imperative. Furthermore, in recent years, the topic of a wealth tax has been mentioned by several constituencies, some for it, others against it. Also, in line with the Constitution and Bill of Rights, specifically socio-economic rights, and the on-going democratisation of our country, we require several fiscal policy initiatives that are focused on redistributive measures as is particularly evident during the Covid-19 pandemic. The policy focus is, however, not only on short-term interventions but includes the encouragement of short-, as well as long-term, savings via the tax system through the retirement reform regime that started in 2012.

Progress towards redistribution has been acknowledged as slow for various reasons. However, the World Bank did acknowledge our pioneer contribution towards distributional household wealth statistics as included in the Financial Wellness survey, by including the main findings in their Poverty and Inequality report in 2018 that reviewed the drivers, constraints and opportunities to overcome poverty and inequality in South Africa between 2006 and 2015. Unemployment, poverty and inequality have been some of the key policy priorities, especially since the end of apartheid in 1994 but unfortunately it seems we are not winning the battle as South Africa still has one of the highest, if not the highest level, of inequality in the world. In the World Bank's 2018 report on Poverty and Inequality, it was noted that wealth inequality still remained high and has been growing over time. The share of household wealth held by the top 10 percent in the distribution was 71 percent, while the bottom 60 percent held 7 percent of the net wealth. The Gini coefficient for South Africa was the highest of the countries under review – reflected above 0.7. Similar statistics for OECD countries suggest that, on average, the top 10 percent of the wealthiest households own 50 percent of total wealth, while the bottom 60 percent own only 13 percent.

Furthermore, the analysis also revealed that wealth inequality is much larger than income inequality as indicated in figure 5.

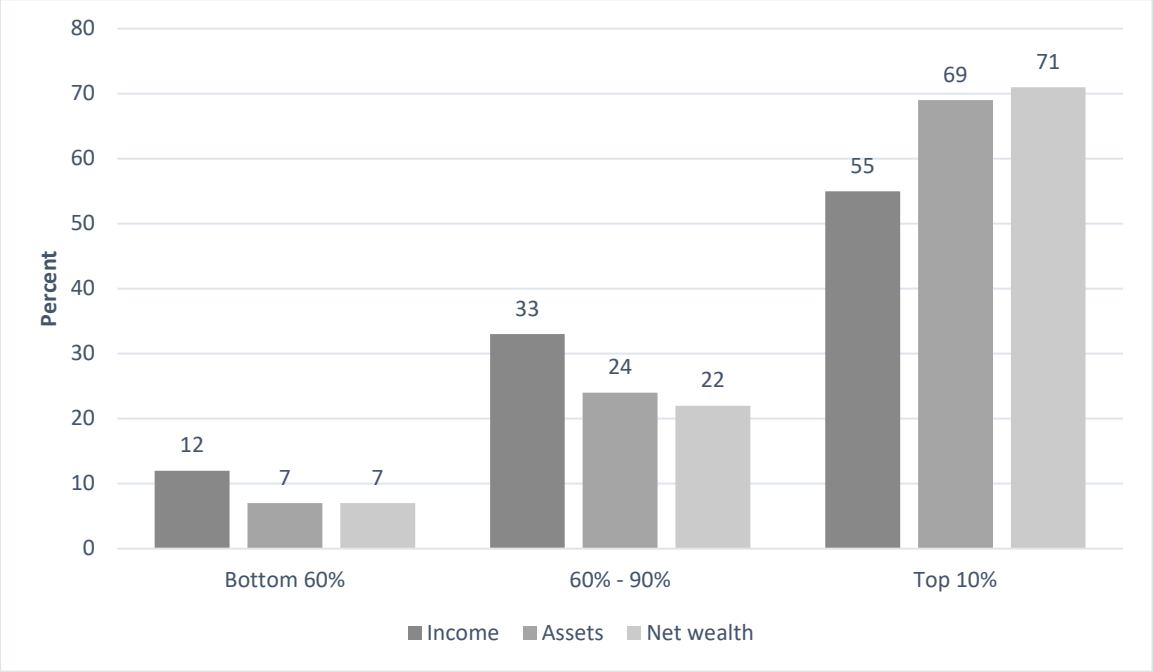


FIGURE 5: The share of household wealth held by the percentiles in the distribution (Source: World Bank, 2018)

The bottom 60 percent of households account for only 12 percent of incomes, 7 percent of asset values, and 7 percent of net wealth. Conversely, the top 10 percent of households account for 55 percent of household incomes, about 69 percent of total household asset values, and 71 percent of household net wealth. Richer households were almost 10 times wealthier than poor households and had much more financial assets and mortgage liabilities.

3.3. Retirement benefits as a key component of household wealth

Furthering my engagement at the Academia ↔ Government level and informed by the results of the Financial Wellness survey, it became evident that households were not well-informed on the value of their retirement benefits, a key fiscal policy priority. This is worrisome as pension assets are the biggest asset class accounting for 37.2% of total household assets (SARB, 2021) and they are for many households their only asset. Given the high policy focus on assisting households to make sufficient provision for their retirement, Prof Andy Lymer (then at the University of Birmingham), Mr Chris Axelson (National Treasury) and I conducted comparative research reviewing the tax regimes and retirement approaches of the South African and United Kingdom governments as both had embarked on a harmonisation or simplification effort with regard to the taxation of retirement fund benefits in an attempt to improve household savings. We found that these two countries

had different approaches to a seemingly similar problem, in like-minded retirement and tax regimes. The study highlights how South Africa compels retirees to annuitise their lumpsum payouts (South African retirees appear unable to manage their retirement funds), while the UK government allows retirees full access to their retirement benefits. This study also indicated areas that could be included in a financial capability competency framework, as a domain of tax literacy that will now be discussed.

4. EMPOWERMENT THROUGH COMPETENCY DEVELOPMENT

Still focusing on my engagement at the Academia ↔ Government but also incorporating my engagement at the Academia ↔ Society level, a recent strand of my work has focused on the development of a financial capability competency framework for South Africa as a way to improve economic and financial wellbeing. The need to develop a financial capability competency framework for South Africa has been identified by the National Consumer Financial Education Committee (NCFEC) and confirmed in my own research. As the chair of the working group tasked with the responsibility of drafting the national financial capability competency framework, I started exploring potential tax literacy domain areas that could be relevant in such a framework as there is a paucity of research on this topic, especially from a South African perspective. As a first attempt to determine the potential scope of such a content domain, I developed a tax knowledge simplification framework (De Clercq, 2019) through the analysis of online queries taxpayers had while trying to complete their own tax returns. This strand was taken further in the development of a conceptual framework for tax literacy developed by me and Prof Carmela Aprea from the University of Mannheim, Germany. The paper is currently under review, but the conceptual framework describes the various competency domains ranging from an individual's focus being required to become his/her own "tax professional", a relational focus requiring an individual to be an informed citizen through an understanding of the tax system and lastly a systemic focus requiring citizens to be responsible citizens regarding all tax-related issues.

To further provide some insights into the possible content areas under the competency domains, I also reviewed an intrinsic case (Stake, 2006) of an entrepreneurial alternative lodgement platform that has responded more holistically to the needs of taxpayers. Using interpretivist assumptions (Denzin & Lincoln, 2018), the data were gleaned from the TaxTim blog as the relevant database for the study. The need for simplification of the current tax legislation in South Africa was evident from the clear lack of understanding of a variety of sections. The lack of understanding is spread across substantive requirements as well as compliance requirements, thus both the Income Tax Act as well as the Tax Administration

Act. By reviewing the substantive and compliance challenges from the taxpayer's perspective, it became clear, as asserted in the novel enquiry carried out in this study of interpretation of taxpayer data, that taxpayers require a more holistic approach to simplification. For them, the compliance questions are framed almost at the same time: "*what* should I do" and "*how* should I do it?".

In an attempt to address these questions, I conducted a follow-up study to identify the competency domains that could be included in a conceptual framework for tax literacy. Using a qualitative approach, the study expands on the current understanding of the competency areas of tax literacy. A dual-purpose literature review was, therefore, conducted. The literature review first provided the body of knowledge that underpinned the study and second, the key data concepts for the draft competency structure to determine whether there is consensus on an international (supra) level. The literature review was further supported by an interactive qualitative analysis (IQA) to present the concept of tax literacy from the perspectives of various national stakeholders in an emerging economy. Accounting and public finance educators from a higher education institution, as well as financial advisers as representatives of a profession with a direct interest in tax-related matters, were considered. Figure 6 portrays the draft competency framework that I developed through this process.

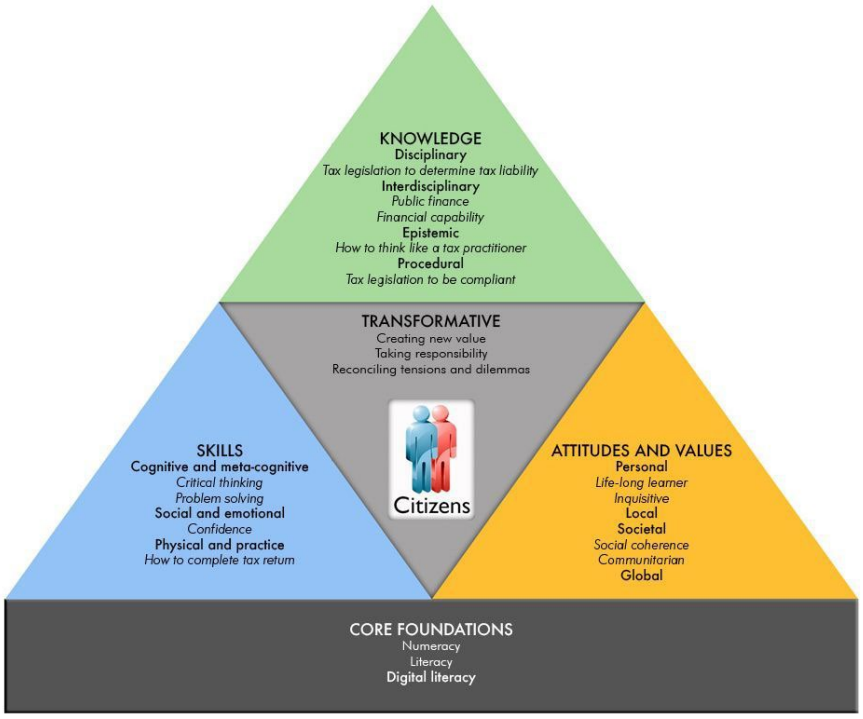


FIGURE 6: A draft competency framework for tax literacy
(Source: De Clercq, 2021)

My work on the identification of the various tax literacy competency domains will inform the development of the national financial capability competency framework given that the domains were developed indigenously by taking note of the local context.

5. NEXT STEPS: THE MOTHEO FINANCIAL DIALOGUES LIVING LAB

5.1. The personal finance ecosystem

My research journey up to now has focused on the translation of some levels of the quadruple helix model into research work. As is evident, they have happened sequentially or sometimes concurrently and simultaneously. In order to provide a more comprehensive overview, my work in the quadruple helix model needs to be seen as conceptualised within a systems theory approach. In order to gain a better understanding of all the stakeholders, systems and relationships involved in personal finance, I support the OECD's recommendations that systems thinking should be considered for the potential analysis of global policy challenges in the 21st century (Hynes, Lees & Müller, 2020), such as the PIU triple challenges South Africa faces, namely poverty, inequality and unemployment. The systems approach argues that better integration of real-world dynamics is gained by understanding the churn of the cross-sectoral, multidisciplinary collaboration that is applicable in policy formulation. This is achieved by taking proper account of the crucial linkages between issues which have generally been treated separately within different specialisations and scientific and institutional "silos". This also holds true for the financial services sector and the fiscal environment, the two prominent systems in my field of research.

Starting with the concept of an ecosystem, the complexity of the financial and economic systems has been mentioned in the introduction. The Covid-19 pandemic has also illustrated that a system approach is required as no institution can solve the so-called "wicked problems" on its own. Many of these issues have been summed up in the "complexity gap" which is the disconnection between institutional capacity and the problems institutions face. Complexity has thus pushed forward the relevance of systems and other systems approaches, such as design thinking (OECD, 2017). The OECD (2017) further describes the key aspects of wicked problems to include the following:

- There are multiple stakeholders, each acting to a certain extent within their own norms.
- Complete diagnosis or understanding is not possible.
- There are no optimum solutions to wicked problems. Nevertheless, long-term options are often discounted in favour of short-term agreements.

- Liminality is inherent in analysis of and intervention in wicked problems.
- Because wicked problems are impossible to observe directly, they are unpredictable and their behaviour is uncertain.
- The efficacy of solutions is difficult to determine because of knock-on effects, self-adaptation and inherent complexity.

Furthermore, as more wicked problems are emerging, the digitisation of the economy coupled with the "digital" voice of consumers resulting in more power and voice to citizens, a siloed approach can no longer be sustained, especially in a country such as South Africa with its high levels of inequality, low employment rates, sticky poverty levels and the national budget on the tip of a fiscal cliff. In order to determine what the OECD refers to as the "aggregate phenomena", it necessitates the identification of possible non-linearities, evolution, interlinkages, tipping points, emergence, trade-offs, synergies and other characteristics of the system under review (Hynes, Lees & Müller, 2020). This raises the question of what the boundaries of such a system will entail. The OECD (2017:3) states that a "system" can be defined as "elements linked together by dynamics that produce an effect, creat[ing] a whole new system or influenc[ing] its elements".

My research, therefore, proposes the first draft of a systems thinking-informed conceptual framework towards a personal finance ecosystem for South Africa, as indicated in figure 7. In doing so, I further the work of Salignac, Hamilton, Noone, Marjolin and Muir (2020) on conceptualising financial well-being through an ecological life-course approach, and Batt, Williams, Brydges, Leyenaar and Tavares (2021), who also advocate for the inclusion of systems thinking in competency framework development. Inspired by Bronfenbrenner's (1979) Ecological Systems Theory on human development, the Personal Finance Ecosystem consists of four interrelated environmental systems, namely the micro-, meso-, exo- and macro-system. The ecological systems theory also proposes that the focus should include the *person*, relevant *processes*, the *context* in which the person is situated as well as the *time* during which the system is being reviewed.

Therefore, starting with the consumer at the centre of the system to ensure the effectiveness of any intervention aimed at improving the economic and financial well-being of consumers, it is necessary to know who that person is, what they know, do and feel. The second layer in the ecosystem, namely the microsystem, reflects those closest to the consumer and how those relationships may influence their financial behaviours and financial outcomes. This talks to the process of financial socialisation that recognises the influence of parents and

communities on the development of financial acumen. Moving on to the exosystem, the issue of financial inclusion is relevant as it is necessary that consumers have access to appropriate financial products and services. Focusing on context, both the national as well as the international context should be considered as indicated in the macro- and supra-macro systems. The Covid-19 pandemic and the current war in Ukraine are two examples of how supra-macro events can have an impact on consumers in South Africa. Lastly, focusing on the time domain of the ecological systems theory, it is important to note that in terms of the chronosystem, changes occur within the system as well as dynamic changes to the totality of the system over time (Batt *et al.*, 2021).

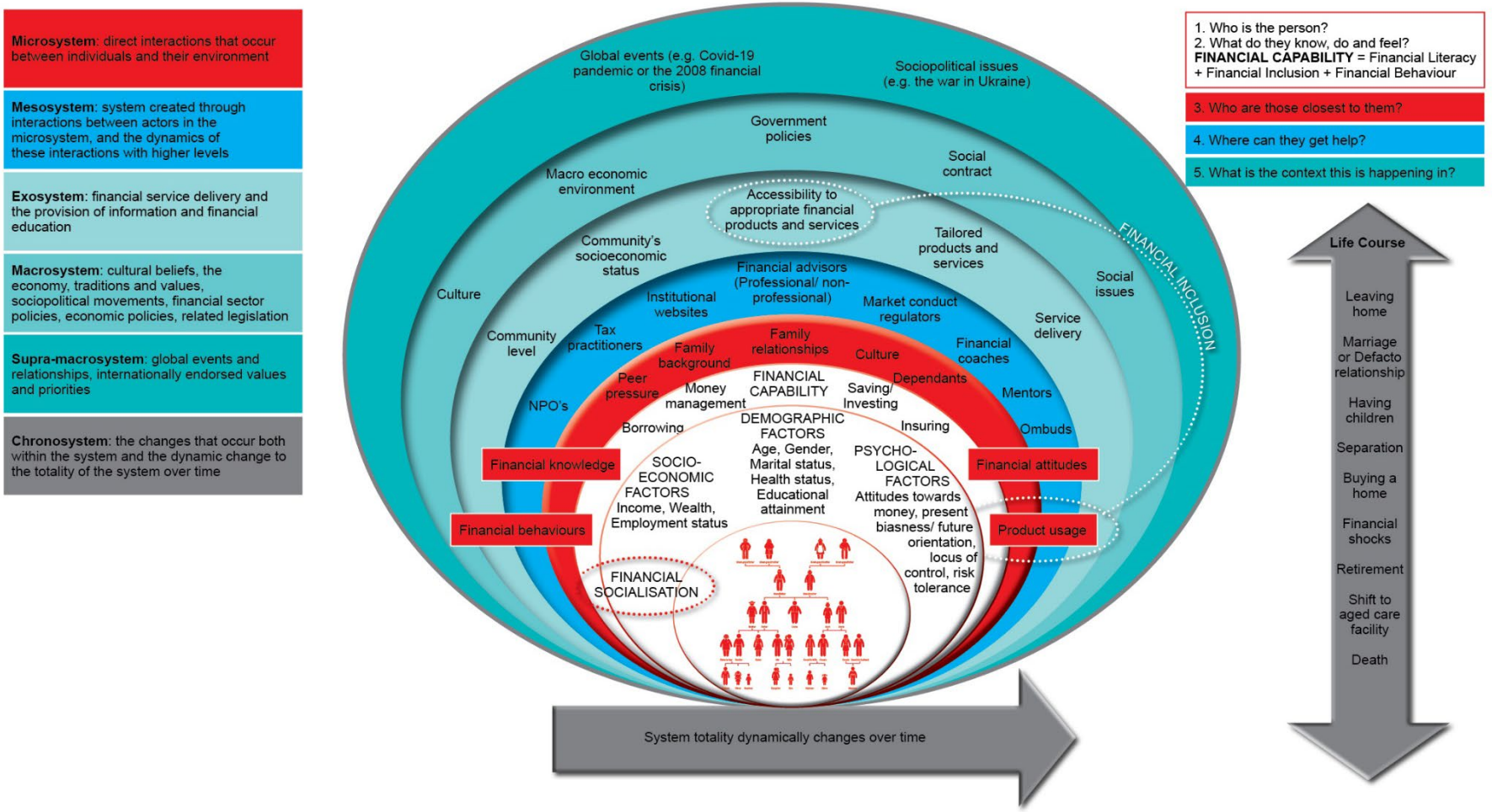


FIGURE 7: The foundations of a personal finance ecosystem

(Source: Adapted from Salignac *et al*., 2020 and Batt *et al*., 2021)

5.2. Personal finance ecosystem operationalised through a living lab approach

Understanding the personal finance ecosystem, underpinned by the quadruple helix model, allows for collaboration and co-creation to take place between policymakers, market conduct regulators, tax authorities, academia, industry and professional bodies, students and civil society through a concept known as the "living lab" platform that will allow for multisectoral parties to provide their unique, respective contributions, resulting in outcomes that are greater than the sum of its parts.

As in any developing area, there are numerous definitions of the concept of living lab, but the following two are instances of those most commonly used:

> The European Network of Living Labs (ENoLL): Living labs are "user-centred open innovation ecosystems based on a systematic user co-creation approach, integrating research and innovation processes in real-life communities and settings" (ENoLL, no date)

and

> Westerlund and Leminen (2011): "physical regions or virtual realities where stakeholders form public-private-people partnerships (4Ps) of firms, public agencies, universities, institutes, and users all collaborating for creation, prototyping, validating, and testing of new technologies, services, products and systems in real-life contexts".

Greve, De Vita, Leminen and Westerlund (2021) describe the living lab platform as an opportunity for providing shared resources that allows for the collaboration of a variety of private and public stakeholders to "gather, create, communicate, and deliver new knowledge, validate existing products, services and processes, facilitate professional development and social impact in real-life context". Such platforms enable the co-creation process between universities, large organisations, small and medium-sized enterprises (SMEs), start-ups and users as well as other stakeholders (Greve *et al.*, 2021). In other words, living labs assume the workings of a quadruple helix model that allows for collaboration between business, research and education, public administration, civil society and users (Hyysalo & Hakkarainen, 2014). They provide various stakeholders with the opportunity to share experiences and to facilitate broader processes of policy learning and knowledge dissemination (Rehm, McLoughlin & Maccani, 2021).

As the living lab approach has evolved, several authors have explored the elements or characteristics of a living lab. Some of the more common characteristics, as identified by Zanetti and Nollo (2019), are illustrated in figure 8.

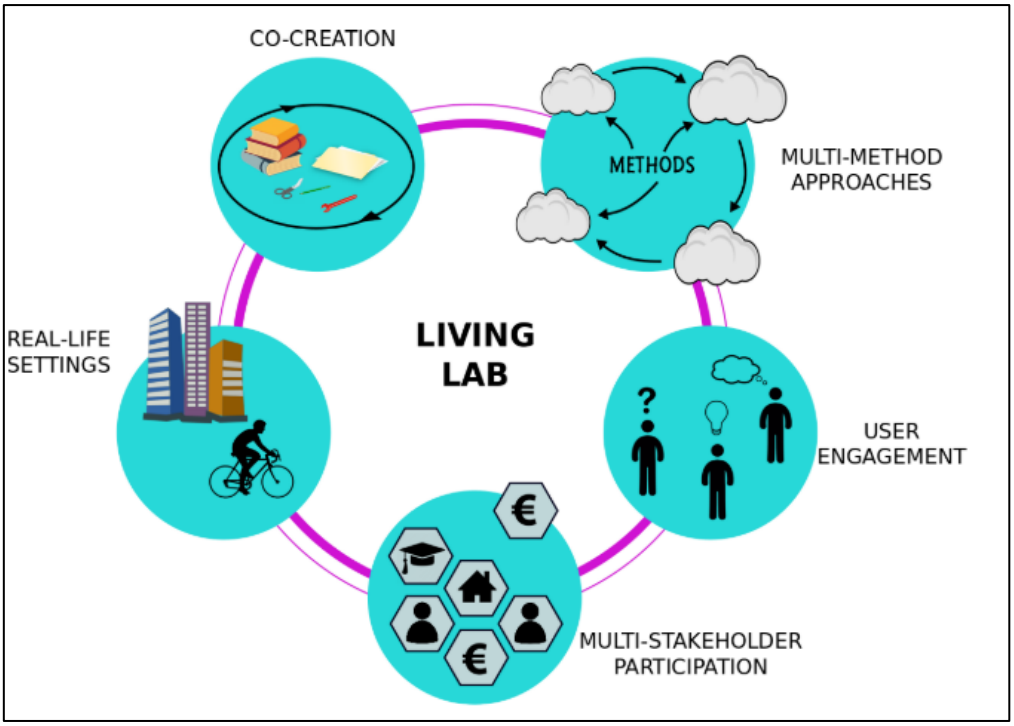


FIGURE 8: Main components of a living lab

(Zanetti & Nollo, 2019)

According to Zanetti and Nollo (2019), the characteristics of a living lab as illustrated in this figure, consist of:

- **Multimethod approaches**: There is no single living lab methodology. All living labs combine and customise different methodologies to best fit their purpose.
- **User engagement**: The users are involved at the beginning of the process and this is the key to success. Users in this scenario refer to representatives of the target audience and students involved in the project as co-creators.
- **Co-creation:** The users become equal contributors rather than subjects of study. They participate as co-creators in a co-design philosophy.
- **Multistakeholder participation**: Even if the focus is on users, involving all relevant stakeholders is crucial. This includes representatives of public and private sectors, academia and civil society.
- **Real-life settings**: The very specific characteristic of living labs is that the activities take place in real-life settings to gain a truthful overview of the context.

5.3. The Motheo Financial Dialogues Living Lab

As indicated, one of the key characteristics of a living lab is the living part – the activities should take place in a real-life setting to gain a truthful as is possible overview of the context. In this regard, I want to share with you our plans which will probably keep me busy until my retirement. As you piece together the multiple dimensions of the scope of the work that I have undertaken, I reiterate that the grand theory informing my work remains the systems theory. As with any system, one has to acknowledge that the system has many components and dimensions, as well as being highly dynamic, requiring any agent within that system to be adaptable and move fluidly, be comfortable with uncertainty, and also capable of working quite widely, both on generic elements of the system as well as specific ones. It also implies that one has to shuttle between different epistemological and ontological levels as an academic. For part of the project, one has to be conceptual and theoretical, then one has to move into interpreting and translating. Simultaneously, the academic also has to keep her mind on the pragmatic and applied nature of the work. At times the work is atomised, and at other times it is a whole system approach. These systemic dimensions often leave "people on the outside looking in" feeling as if the academic is being a "Jill of all trades and a mistress of none". Yet, the converse is often true, as new frontiers of science call on the academic to be more multidisciplinary and also agile so as to keep up to date with diversity of trends and bodies of knowledge. Unless you are able to make your peace with systems complexity holding it all together, you could feel as if you are within an academic vortex. But life is also complex and we are all alive to tell its tale. I am enthused thus to share the tale of the multiplicity of projects with you. To this end, I now introduce our engaged scholarship project, entitled the Motheo Financial Dialogues Living Lab. In line with the Academic ↔ Industry level of the quadruple helix model, we have embarked on this engaged scholarship project in conjunction with the Momentum Metropolitan Foundation to develop a technology-supported online learning environment that will provide open access to the youth of South Africa through a living lab platform. Young adults are in a precarious period of their lives as they enter the world of work and transition from being financially dependent to being financially independent. The youth of South Africa is also one of the priority beneficiaries in a variety of national initiatives and policies. In addition to the development of the online learning environment, the project will also develop Open Education Resources that will be made available to others supporting this target audience.

As indicated, living labs are characterised by collaboration between users and other stakeholders in real-life environments as they allow for the establishment of open innovation networks amongst a variety of stakeholders, integrating both user-centred research and open innovation (Leminen, Westerlund & Nyström, 2012). Focusing on the users and stakeholders, figure 9 provides a high-level overview of the potential experimentation platform's users and stakeholders that we envisage to be involved (Rehm, McLoughlin & Maccani, 2021) as they have a vested interest in the economic and financial well-being of young South Africans. It is proposed that the living lab platform be developed as a holistic platform that incorporates taxation and financial planning assistance. The platform will require support from government, academia, industry and civil society, but through the experimentation lens, appropriate to a lab, all users and stakeholders will be included in the design, development and implementation.

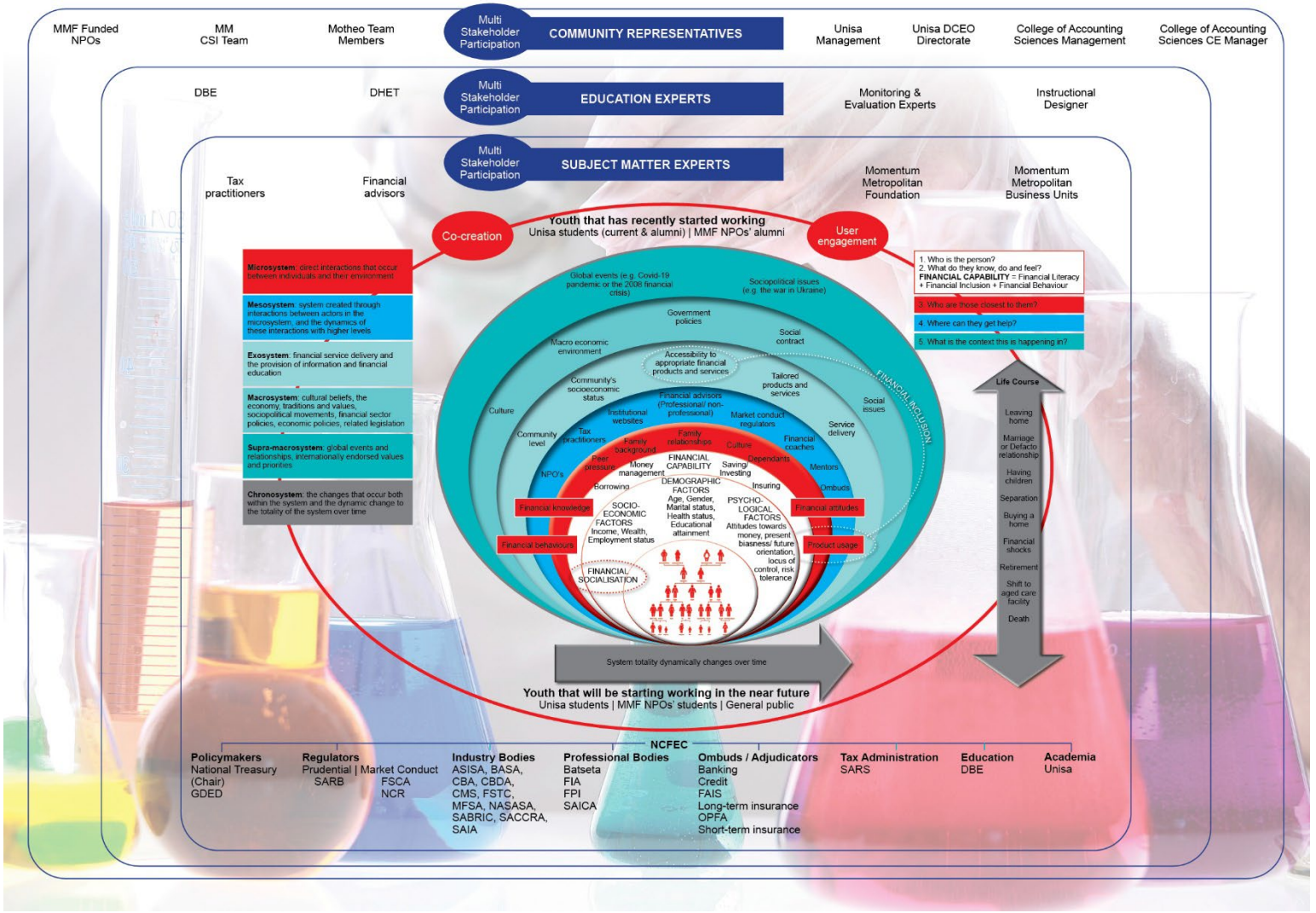


FIGURE 9: The Motheo Financial Dialogues Living Lab

(Source: Author's own)

Starting with the users, the youth of South Africa will be represented across a spectrum of attributes, but most importantly, selected based on having recently started working as well as those that will be starting work soon. The potential users will be involved in the co-creation of content but also sensitising the rest of the project team to their realities – the platform will be developed by the youth for the youth.

As per the quadruple helix model, it will also be necessary to move beyond the financial sector and engage with stakeholders from a broader spectrum. Starting with subject matter experts, the collaboration and input across the tax fraternity as represented by tax practitioners and the financial planning fraternity as represented by financial advisors will be required. Given the collaborative nature of the project, input from the Momentum Metropolitan Foundation as well as Momentum Metropolitan business will be obtained. However, a great opportunity for extensive collaboration on relevant topic input as well as the confirmation of the personal finance ecosystem will be obtained via the Motheo team members' involvement in the NCFEC. Through the input of this range of experts, it will be possible to identify the key competencies that a young person entering the world of work should have across the various financial capability domains. The insights gained from these subject experts will be overlaid with those indicated by the youth themselves as it is also important to note that from the youth's perspective, there is the risk that "they don't know what they don't know" – however their input based on their reality is essential to ensure the project achieves its objectives.

The next sets of experts that are essential in the project design and development are the educational experts as it is necessary to ensure that the engaged scholarship programme adhered to sound pedagogical principles. In line with the latest thinking in instructional design, the project is implementing the Successive Approximation Model (SAM) that allows for agility through its design and prototyping structure. A comprehensive monitoring and evaluation process will underpin the whole implementation process to ensure that evidence-based results can be produced.

Lastly, furthering the nature of engaged scholarship which Unisa as an engaged higher education institution endorses, Unisa is moving away from being a closed, rigid and information-hording institution towards a collaborative institution as this living lab portrays. In line with the open innovation paradigm, we are an open institution, allowing for the connection between internal and external ecosystems or communities that will all gain from the collaboration. The need to close the gap between a higher education institution and its community has already been identified in the South African context. The Higher Education

White Paper of 1997 identified community engagement as a core purpose of higher education in South Africa, together with teaching, learning and research. The need for strategic partnerships lies in the critical challenge involving the scarcity of learning opportunities highlighted in the White Paper on Post School Education and Training (2013):

> "Communities have learning needs that have not been catered for by the current public education and training institutions" (2013:20)
>
> and
>
> "education opportunities for adults and post-school youth have been insufficient and their quality has been generally poor" (2013:21).

The living lab proposal therefore allows for Unisa as a higher education institution in South Africa to leverage its community partners towards quality engaged scholarship that will enrich academia, while simultaneously serving the development needs of the country, with specific reference to addressing social problems, especially relating to vulnerable groups.

CONCLUDING REMARKS

In conclusion, starting with baby steps in 2006, my personal development over the last number of years has prepared me for this opportunity today. I have also reached this milestone through the support of fellow researchers and the students whom I have been privileged to supervise. I have also been given leadership to pursue, that might be seen by some as different from a conventional academic role. However, my contribution in the field of economic and financial well-being through my NRF rating and promotion has been recognised and this has motivated me to step-up. With this very ambitious project I hope to be able to make a positive contribution towards a systemic, living quadruple helix model but with a special focus on the next generations: the youth of South Africa. Hopefully I can play a small part in empowering the youth of South Africa to higher levels of economic and financial well-being and I am leaving you with the words of Erin Lowry:

> "Financial health is a privilege that should be afforded to everyone – and it starts with being willing to have the conversation while also recognizing our own background and bias."

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