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The Evolution of Social Security Research

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About Social Security Research Centre

The Social Security Research Centre (SSRC) was established in March 2011 at the Faculty of Economics and Administration (FEA), University of Malaya to initiate and carry out research, teaching and dissemination of evidence-based knowledge in the area of social security, including old age financial protection in order to enhance the understanding of this critical topic to promote economic development and social cohesion in Malaysia.

To support the research in social security in general and old-age financial protection in particular the Employees Provident Fund (EPF) of Malaysia has graciously provided an endowment fund to create the nation's first endowed Chair in Old Age Financial Protection (OAFPC) at University of Malaya. OAFPC has the over-riding objectives to help formulate policies to promote better social security and improve old age financial protection, and to help formulate policies to promote economic growth in an ageing society for consideration by the Government of Malaysia.

The interest in social security and old-age financial protection is ever growing in view of an ageing population. Malaysia is also subjected to rising life expectancy and falling fertility rates, the perceived inadequacy of current social security provisions, coupled with the added fear that simply more expenditure may not be conducive to the development and growth objectives of the society. This calls for innovative policy solutions that may be inspired by international experience based on an empirical grounding in national data and analysis.

The Evolution of Social Security Research

Abstract

This article examines the evolution of social security research from a theoretical and empirical perspective. This is done through an extensive review and analysis of publications from the *Journal of International Social Security Review* published by Wiley within a 50-year period (1967-2017). It was observed that at a different period in time, the social security research focused on different national and international issues that invoked different social welfare programs and pension systems approach (public or private) to facilitate the explanation of its final socio-economic impact into different social groups in the same country or region respectively.

Keywords: Econographicology, social security, economics teaching, policy modeling, pensions

JEL Clasificación: E65

1. Introduction

The concept of social security was driven by the need to protect the emerging working class during the industrial revolution. Bismarck's work-based earnings model in the 1880s and Danish's universal flat-rate model in 1891 instituted to provide limited coverage and meager benefits to disabled workforce. Several European countries created analogous social pension schemes the ensuing decades: British Old Pension Act (1908) and Insurance Act (1911), Swedish compulsory old-age pension (1925), and Swiss Act (1935) (Gordon, 1988). In Britain, the Beveridge committee's report (1942) envisioned a universal social security system that ensued full employment and run through public institutions of social protection. In contrast with the German model, the Anglo-Saxon social security model maintained the flat-rate distinctive feature (Veit-Wilson, 1992).

Notwithstanding, social security is a relative new discipline that has steadily matured over the past forty years. The research development of the field has been accompanied by the need to preserve social security system effectiveness while maintaining their efficiency. The design of the social security models was based on the unrealistic assumptions of sustained economic growth, full employment and low inflation. European social security systems followed generous redistribution policies that went beyond the government budget. The postwar twenty-five-year sustained economic growth ended in 1970s with the outbreaks of stagflation and oil crisis. In association with shrinking contribution bases and growing beneficiary populations, the new economic landscape puts increasing pressure on the fiscal sustainability of social expenditures. The full financial impact on public finances was not immediate observable until the first generation begun to retire.

The field has become consolidated over this period, while simultaneously expanding the range of topics analyzed and research methodologies used. Different theories and approaches, addressing diverse research topics, have been developed to overcome the deficiencies social security systems face and explore new cooperative mechanisms. This paper aims to shed light on the past and current trends in theoretical and empirical research in social security, a field characterized by assorted and manifold aspects of relevance. It also highlights future challenges and sketches a few possible futures scenarios for academic research.

The paper is organized as follows. Section 2 offers an overview of the relevant literature. Section 3 briefly reviews. Section 4 explores the possible negotiation scenarios. The final section concludes the paper. The appendix contains figures.

2. Theoretical Considerations on Social Security

The theoretical approaches and concepts emerged in the field of social security focused on the classification of social security mechanism viewed through a cultural, social, economic, and political prism. Social security designs varied considerably within and across regions demonstrating a vast spectrum of views (Palacios & Pallares-Millares, 2000). The classification in various models facilitates to subsume the social security system institutional set-up within a broader regulatory and legislative framework. The main criteria used to identify the institutional organization of each type of welfare state are: the organizational nature and structure (central, segment, public, private); the population coverage (universal, means-tested, employer-liability); nature of benefits (pension, social assistance, health care), and; the methods of financing (direct and/or indirect taxation, member contributions, mixed financing) (Antonen & Sipila, 1996).

The institutional structure of social security was thoroughly studied by Titmuss (1958); Esping-Andersen (1990); Palme (1990); Ferrera (1996); Korpi & Palme (1998); and Gough (2004). The taxonomy of social security systems has initially been identified by Titmuss (1958) into three different regimes: the residual model, the institutional-redistributive model, and the industrial achievement-performance model. In the residual model, the state's role is limited to ensure a safety net, and intervene when the free market mechanisms and family are unable to meet a minimum level of decent living conditions. The institutional-redistributive model on the other hand, aims at universal coverage of needs, irrespective of the mechanisms of the free market. Finally, in the industrial achievement-performance model, the social needs are covered based on productivity and work performance following the principle of meritocracy and professional status.

Esping-Andersen (1990) identified the concept of welfare state, in which the state or a well-established network of social institutions plays a key role in the protection and promotion of the economic and social well-being of citizens. He distinguished three types or worlds of the welfare state which show several

similarities with Titmuss models. The liberal Anglo-Saxon model provides selectively minimum benefits; it provides means-tested assistance and mainly welfare services. It corresponds to Titmuss's residual model with the exception here the state takes care of welfare. United States, Canada, and the United Kingdom welfare pension schemes are characteristic paradigms.

The conservative-corporate model focuses on the profitability of the market and the commercialization, like the liberal model, but maintains distinctive differences in terms of social status. In contrast with the liberal model, the role of private insurance is limited, while great emphasis is given to traditional family standards. It corresponds to Titmuss's industrial achievement-performance model. Germany, France, Italy, and Austria welfare pension schemes are characteristic paradigms. The third world welfare state is the social-democratic model found in the Nordic countries. This model guarantees a satisfactory standard of living for the entire population, regardless of status of employment, or the level of income while acts proactively in terms of family support. This model matches with Titmuss's institutional-redistributive model.

Diverse classifications may therefore be performed as separate mechanisms of the social security system. For example, the categorization on four types of social security systems, with regard to the question of whether their main aim is to guarantee a minimum income for all citizens who have reached the age of retirement (Palme, 1990). Based on this criterion, Palme distinguishes the following models: the targeted model, the voluntary-subsidized model, the corporatist model, and the basic security model. Palme used similar features on his model classification with those of Titmuss and Andersen models. Korpi & Palme (1998) finalized the model by adding a fifth model, the encompassing model. This model encompasses all citizens, unrelated with income status, into a sufficiently comprehensive social welfare package of benefits that solely supervised by the state.

The scientific debate regarding the welfare state models went beyond Esping-Andersen's three worlds, identifying at least another three models that showed up later on: the welfare State, under a special regime transition countries of Eastern Europe, which was called post-communist conservative corporatism (Deacon, 1992; Sapir, 2006); family-oriented, Confucian model of Japan and the newly industrialized countries of Eastern Asia (G. Esping-Andersen, 1994); and the South European template (Ferrera, 1996).

At the turn of the twentieth century, welfare state deadlock and retrenchment were seminal for the evolution of new dynamics in the social reform context, emphasizing the significance of former social policies as well as the role of involved parties in the welfare state (Pierson, 1994). The path-dependence theory argues that welfare is an integral part of the society, so any partial or total structural, economic, political, and technological system transformation is directly linked with the society's transformation. The archetype of this theory is that set of decisions taken for any given circumstance was limited by the decisions taken in the past, even though past circumstances are no longer relevant (Bianco, Gerali, & Massaro, 1997; Pierson, 2000).

According to Gough (2004), the traditional welfare classification should leave behind. Regions adopted the same welfare model, however, countries' socio-economic-political development through time shows significant signs of divergence from the initial pattern. Investigating one hundred one welfare schemes worldwide, he pinpointed the following cross-regional patterns in terms of state education and health expenditures, private health spending and the combined international inflows of aid and remittances:

1. Actual or potential welfare state regimes: welfare systems mimicking the Bismarkian welfare model. This model was adopted by continental a few Eastern European countries, Latin American countries in the south, the African states of Algeria, Tunisia and Kenya and Thailand from Southeast Asia.
2. More effective informal security regimes: welfare systems close to the Beveridgean welfare model. This cluster consisted by countries, mainly from Southeast Asia – including China and Sri Lanka – with the remained countries of Latin America and some countries from the Middle East.
3. Less effective informal security regimes: welfare systems prone to Beveridgean welfare model, but with below-average functions in terms of spending, protection and benefits. In this category was comprised by South Asian and certain sub-Saharan African countries.
4. Externally dependent insecurity regimes: welfare systems with poor organizational structure. These systems are heavily dependent on subsidies and external aid. This cluster includes the sub-Saharan African states with available data.

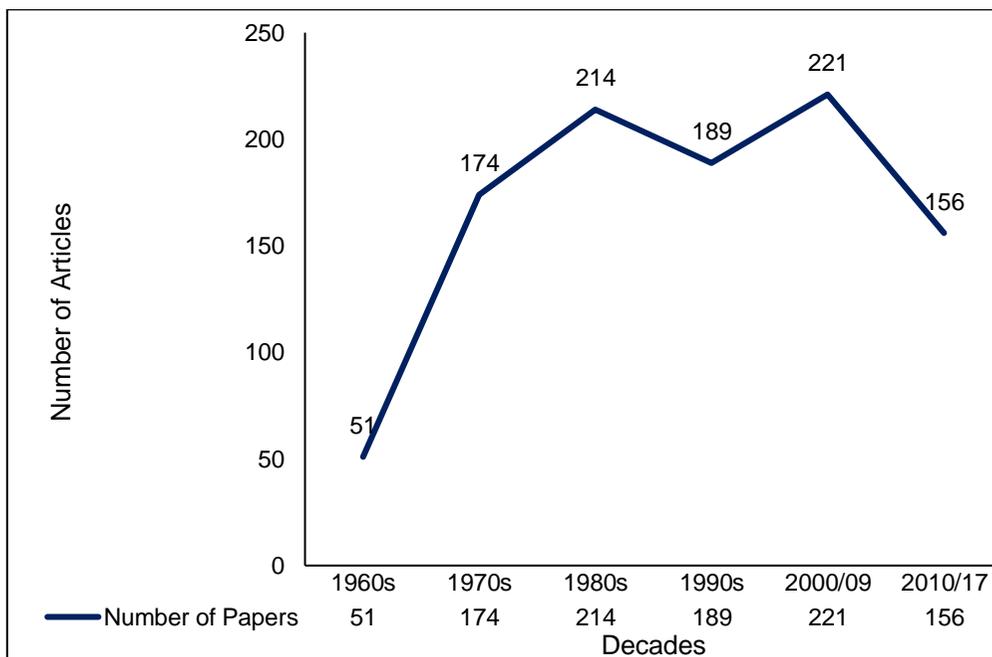
Furthermore, a common notion existed amongst gender scholars that a gender approach requires a rethinking of the welfare state and its history (Lewis & Ostner, 1994). Under this perspective, citizenship and civil society

play a catalytic role in the policy formation process (Hobson, 1997; Miller, 2006).

3. The Evolution of Empirical Research in Social Security

Over the course of its development, social security has gradually accumulated scientific knowledge, both of empirical and methodological nature. The line of research focused on the three basic system mechanisms, including social security, social welfare and healthcare. The employment of different methodologies keeps a constant qualitative transformation in respect of content and form and quantitative transformation in respect of output. A content analysis of 1005 papers was conducted between different categories issued by the Journal of International Social Security Review in the last fifty years (1967 and 2017) (see Figure 1).

Figure 1: Papers Published in the Journal of International Social Security Review (1967-2017)



Source: Journal of International Social Security Review

The bibliometric analysis yielded 1005 scholarly articles from 1967 to 2017. The publication record for social security has grown geometrically over the last 50 years. In the late of 1960s, an average of 5.1 papers were produced about social security, and in the following decade (1970-1979), that average rose to 17.4 publications per year. The decade after (1980s-1989), the average moderately increased to 21.4 publications per year, which was slightly decreased to 18.9 publications per year in the 1990s. The 2000s was one of the most expansive periods for the field, producing 22.1 publications per year. In the last decade (2010-2017), the number of average paper publications went down to 15.6 publications per year about social security, notwithstanding, this number undoubtedly will continue to rise. Furthermore, the content analysis identified key research areas to consider in the design of social security, which can be classified into the following 25 categories (see Table 1).

Table 1: Journal of International Social Security Review Papers Distribution by 25 Categories (1967-2017)

No.	Social Security Research Categories	1960s	1970s	1980s	1990s	2000/09	2010/17	Total	%
1	General Social Security and Social Protection Issues	25	67	60	50	58	30	290	29%
2	Insurance and Assurance Issues	4	13	22	13	11	5	68	7%
3	Retirement and Pensions Issues	5	13	15	30	53	30	146	15%
4	Injury, Dissabled, Illnesses, Accidents, Sickness, Incapacity, Rehabilitation, Handdicapped Issues	3	15	30	7	15	7	77	8%
5	Medical or Health Care and Benefits Issues	5	6	17	21	18	16	83	8%
6	Social Security Institutions, Administration, Governance, and Management Issues	3	4	5	8	2	7	29	3%
7	Informal Sector, Poverty, and Inflation	0	0	0	5	3	3	11	1%
8	Gender, Women, Family, Maternity, Mortality, Single-Parent, Childhold Social Programs	0	11	12	11	5	5	44	4%
9	Human rights and Moral&Hazard in Social Security Issues	1	1	0	1	0	0	3	0%
10	Employees' Provident Fund Schemes	0	1	0	2	0	0	3	0%
11	Social Welfare, Social Assistance, Allowance, Transactions, transfers, Compesations, and Payments	0	2	1	2	5	7	17	2%
12	Wages, Savings, Income Tax, Subsidies, Income Redistribution, Income Support Programs	0	10	10	5	12	10	47	5%
13	Labor and Occupational Safety, Unemployment Compesation and Unemployment Insurance	0	6	7	11	7	7	38	4%
14	Mutual Funds, Personal Finances, Savings, Portafolios, Stock Market, and Bonds	0	0	1	0	0	0	1	0%
15	Economic Recession and Financial Crisis	0	2	0	0	1	5	8	1%
16	Economic Development and Economic Growth	0	0	5	0	2	0	7	1%
17	Economic Productivity and Efficiency Issues	0	0	2	0	1	0	3	0%

No.	Social Security Research Categories	1960s	1970s	1980s	1990s	2000/09	2010/17	Total	%
18	Urban, Rural, and Foreigners Social Security Coverage Issues	0	0	3	0	0	2	5	0%
19	Actuarial, Forecasting, and Quantitative Techniques	1	11	11	3	0	8	34	3%
20	Aging, Elderly, Standard of Living of Old People	0	6	6	7	12	6	37	4%
21	Sociology, Demography, Law, Politics, and Regulations	4	5	5	2	7	3	26	3%
22	Early Retirement and Partial Retirement Issues	0	1	1	0	0	0	2	0%
23	Structural Adjustment and Privatization	0	0	0	3	1	0	4	0%
24	Labor Movement and Welfare State	0	0	1	8	3	5	17	2%
25	Low Income, Developing Country, and Least Developed Countries Social Security Issues	0	0	0	0	5	0	5	0%
	Total	51	174	214	189	221	156	1005	100%

Source: Journal of International Social Security Review from Sciences Direct by Wiley (2017)

Until the First World War, social insurance initially had been incorporated to social welfare programs as a supplemental component, whereas now social insurance programs were seen as positive alternatives to social assistance programs. During the interwar period, social security extended to branches of unemployment and occupational disease. The insurance for self-employed established in the 1950s. After the Second World War, most developed countries experienced a twenty-five-year period of sustained economic growth. Governments allocated a significant part of their budgets for welfare expansion, in a context where public expenditure and aggregate demand were seen as key ingredients of the economic growth strategy. The systems in the 1960s became more comprehensive and generous based on the above growth conditions as well as on the conditions of low interest rates, high wage growth rate, and high birth rate. The aforementioned trends in social security followed by the need of academic scholars and researchers to explore related areas of social security: general social security and social protection issues (25 papers = 50%); retirement and pensions issues (5 papers = 10%); medical or health care and benefits issues (5 papers = 10%); insurance and assurance issues (4 papers = 8%); and, the sociology, demography, law, politics, and regulations (4 papers = 8%).

However, the stagflation along with 1970s energy crisis slackened most of the developed economies, which in conjunction with the reduction in pensionable age no average and the increased longevity put the welfare state's future to uncertainty. Social security research in the 1970s was focused on: General Social Security and Social Protection Issues (67 papers = 38%); Injury, Disabled, Illnesses, Accidents, Sickness, Incapacity, Rehabilitation, Handicapped Issues (15 papers = 9%); insurance and assurance issues (13 papers = 7%); and, the Retirement and Pensions Issues (13 papers = 7%).

The 1980s marked by the prevalence of neoliberal economic policies proceeded to partly of fully privatization of social security schemes, followed by a phase of skepticism about their effectiveness in 1990s. Accordingly, the trend of the social security research changed dramatically. Whereas in the 1980s the general social security and social protection issues (60 papers = 28%) remained in the first place among all categories, retirement and pensions issues (15 papers = 7%) moved from third place to the second place in the list of categories. The third place is taking over by the insurance and assurance issues (22 papers = 10%). In the 1990s, the aforementioned research areas continued to monopolize researchers' interest: general social security and social protection issues (50 papers = 26%); retirement and

pensions issues (30 papers = 16%); and, medical or health care and benefits issues (21 papers = 11%).

Growing criticism with regard to the development deficiencies, those policy blueprints produced led eventually to new debates worldwide. In the first decade of the new millennium, the main areas of research on social security remain unchanged: general social security and social protection issues (58 papers = 26%); retirement and pensions issues (53 papers = 24%); and, medical or health care and benefits issues (18 papers = 8%). In 2010s, policy makers have shifted to policies and programs designed to reduce poverty and vulnerability by promoting efficient labor markets, diminishing people's exposure to risks, and enhancing their capacity to manage economic and social risks, such as unemployment, exclusion, sickness, disability and old age. Social protection issues have become the new area of research by taking over the third place of preference: general social security and social protection issues and the retirement and pensions issues (30 papers = 19%); medical or health care and benefits issues (16 papers = 10%); and, wages, savings, income tax, subsidies, income redistribution, income support programs (10 papers = 6%).

Among the 1005 papers on social security published in *Journal of International Social Security Review* in the past fifty years, numerous frameworks, conceptual models, and vulnerability assessment techniques have been developed to advance both the theoretical underpinnings and practical applications of social security: benefit/cost, risk, times series, or forecasting analysis through the application of econometric methods and use of microeconomic and macroeconomic level secondary data. The vast majority of the scholarly articles are results of monodisciplinary collaborations with sixty five percent of them became a prevalent part of economic methodology. Only one percent of those papers followed a multidisciplinary approach, drawing on knowledge and expertise outside of social security discipline. The content analysis shown that economic methodology moves beyond simple collaboration and teaming to integrate data, techniques, perspectives, and concepts, identifying fifty-three variables used from journal papers to advance fundamental understanding or to solve real world issues on social security (see Table 2).

Table 2: The Evaluation of the Journal of International Social Security Review by Research Approach

Modeling Approach	Total	%
Predicting approach	90	9%
Monitoring approach	286	30%
Simulation approach	1	1%
Descriptive approach	603	60%
Total	1005	100%
Empirical approach	954.8	95%
Theoretical approach	50	5%
Total	1005	100%
Quantitative approach	251.3	25%
Qualitative approach	753.8	75%
Total	1005	100%
Primary data approach	30	3%
Secondary data approach	964.8	96%
Mix data approach	10	1%
Total	1005	100%
Long run approach	201	20%
Medium run approach	50	5%
Short run approach	754	75%
Total	1005	100%
Linear regression analysis approach	31	3%
Multiple regression analysis approach	20	2%
Times series data approach	251	25%
Cross-sectional data approach	502	50%
Panel data modeling approach	201	20%
Multi-dimensional panel data approach	0	0%
Total	1005	100%
Economics approach	653	65%
Social approach	101	10%
Technological approach	0	0%
Political approach	151	15%
Environment approach	0	0%
Institutional approach	151	15%
Sciences approach	0	0%
Multi-disciplinary approach	0	1%

Modeling Approach	Total	%
Total	1005	100%
Original theoretical framework	20	2%
Traditional theoretical framework	975	97%
Extension theoretical framework	10	1%
Total	1005	100%
Private sector approach	151	15%
Public sector approach	804	80%
Public/private sector approach	50	5%
Total	1005	100%
Macroeconomics analysis approach	854	85%
Microeconomics analysis approach	151	15%
Total	1005	100%
Partial equilibrium approach	402	40%
General equilibrium approach	603	60%
Total	1005	100%
Dynamic social security approach	251	25%
Static social security approach	754	75%
Total	1005	100%
Perfect competition approach	251	25%
Imperfect competition approach	754	75%
Total	1005	100%
National level approach	603	60%
Regional level approach	201	20%
Global level approach	201	20%
Total	1005	100%
Keynesian social security approach	352	35%
Monetary approach	101	10%
Classic Approach approach	201	20%
Neo-Classic Approach approach	302	30%
Others approaches	50	5%
Total	1005	100%

Source: Journal of International Social Security Review from Sciences Direct by Wiley (2017)

The nature of research on social security is dynamic and multidimensional, enabling researchers to investigate a wide range of societal issues under an economic (65% = 653 papers), social (10% = 101 papers), or political (15% = 151 papers) prism; related to public (80% = 804 papers), private (15% = 151 papers) sector or mix (5% = 50 papers); within a macroeconomic (85% = 854 papers) or microeconomic (15% = 151 papers) environment; and in national (60% = 603 papers), regional (20% = 201 papers), and global (20% = 201 papers) level.

Furthermore, it is highly analytical, employing a wide range of theoretical tools, models, and design mechanics. The vast stream of papers adopted a traditional theoretical framework (97% = 975 papers), developing Keynesian (35% = 352 papers), monetary (10% = 101 papers), neo-classic (30% = 302 papers) and classic economic models (20% = 201 papers based on general equilibrium (60% = 603 papers), static (75% = 754 papers) and imperfect competition market setting (75% = 754 papers).

The research design of the scholarly papers is predominantly empirical in nature (95% = 955 papers), leaving behind the purely theoretical ones (5% = 50 papers). Empirical evidence was mainly analyzed qualitatively (75% = 754 papers), using firstly descriptive (60% = 603 papers) and secondary monitoring (30% = 286 papers). For those papers that followed a quantitative path, the predictive approach (9% = 90 papers) takes the lion share from the simulation approach (1% = 1 paper). In the case of data analysis, ninety six percent of all papers use secondary data sources, whereas the rest use primary (3% = 30 papers) or mix data (1% = 10). The quantitative papers use various econometric techniques, including times series (25% = 251 papers), cross-sectional (50% = 502 papers), and panel data analysis (20% = 201 papers).

It is apparent from the analysis that the future of social security research depends on the flexibility and dynamism of the social security research analytical frameworks adapted to the real world through the application of practical research techniques, methods, methodologies and research focus through the integration of different knowledge fields. Hence, social security research can be considered as a multi-discipline research approach that could facilitate the study of different socio-economic and political problems that could have negative impacts on the social security performance anywhere and anytime. It is apt to stress that social security research is an important technical-theoretical analytical tool for future academics, economists, policy

makers and supranational institutions such as World Bank (WB), United Nations (UN) and others. More importantly, the relative rise in the impact factor of the Journal of International Social Security Review from 0.48 in the year 2004 to 1.96 in the year 2011 based on the Wiley Institute for Science Information (ISI) convincingly justifies the relevance of social security research to a large array of socio-economic and political issues. (Thomson Reuters, 2011).

4. Concluding Remarks

This paper concludes that social security research can open a new research field to academics, policy makers and social scientist in the study of complex and dynamic behavior of socio-economic-welfare problems that can affect our society anytime and anywhere without borders. This conclusion is drawn from the review and analysis of 1005 articles published 50 years ago (1967-2017) by the Journal of International Social Security Review. The trend of the social security research is changing remarkably fast, with its origins invoked by uses of new research approaches and research focus. Finally, the social security research can become a powerful analytical tool that accept the adaptation of any technique, methodology, method and research approach such as pensions, insurance, health care, poverty, income distribution, unemployment, transfers, taxation to explain deeply complex socio-political and economic problems that affect different social groups in the society at different geographical areas under different historical events.

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His research, which has been published extensively in journals such as Journal of Policy Modeling, Disasters, Quality and Quantity, Singapore Economic Review, Panoeconomicus, Contemporary Economics, Defense and Peace Economics, Procedia Computer Sciences, Malaysian Journal of Economic Studies, Malaysian Journal of Science, and books, that revolves around policy-oriented topics relevant for worldwide long-term development, including policy modeling, natural disasters evaluation, war and border conflicts, social security, and food security issues.

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