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FACTORS INFLUENCING POLICY TRANSFER TO AUTHORITARIAN STATE: INNOVATION VOUCHER FROM MONTENEGRO AND LESSON-LEARNT FOR VIETNAM'S NATIONAL INNOVATION SYSTEM

Dissertation submitted by DAO LE LINH CHI

in partial fulfillment of the requirements for the degree of

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LIST OF ABBREVIATIONS

CPV	Communist Party of Vietnam
HGFs	High-growth firms
IV	Innovation Vouchers
MOST	Vietnam's Ministry of Science and Technology
MPI	Vietnam's Ministry of Planning and Investment
MOF	Vietnam's Ministry of Finance
NATIF	National Technology Innovation Fund
NIC	National Innovation Center
NIS	National Innovation System
NISP	National Innovation Startup Portal
PRO	Public research organizations
R&D	Research and Development
S3	Montenegro's Smart Sustainability Strategy
S&T	Science and Technology
SME	Small and medium enterprises
SMEDD	Montenegro's SME Development Directorate
SMEDF	Vietnam's SME Development Funds

ABSTRACT

In the wake of Vietnam's macroeconomic ambition for the upcoming decade, the concept of "Innovation Vouchers" (IV) has been promoted by global institutions as a strategic tool to bridge the gap between public research bodies and the private sector. Despite the absence of successful policy adoption to date, this thesis leverages the policy transfer framework to assess the compatibility of IV with Vietnam's context. It delves into the unique dynamics that shape policy transfer, informed by insights from Montenegro's experiences and an evaluation of Vietnam's National Innovation System (NIS) and its authoritarian regime. The research identifies IV as an apt instrument for Vietanam NIS which is steered by market-driven principles and macro-policy orchestration, supplemented by numerous programs to ensure the long-term effect of IV transfer. The study reveals that IV transfer is intricately linked to Vietnam's specific milieu, including its one-state party model, historical legacy, Confucian value and economic profile, all of which exert significant directional forces on the policy transfer process. Vietnam's autonomous political ideology, distinct from the paradigms of global institutions could potentially impede the internal advocacy for innovation coordination, which currently faces challenges in indentify focal point for innovation activities. The findings offer empirical contributions to the pool of policy transfer literature, advocating for the application of the framework which extend beynd its descriptive function and anticipate the trajectory of policy transfer through the synthesis with domain-specific policy theories.

CHAPTER 1: INTRODUCTION

1.1 Vietnam Context: From macro-level productivity challenge to mirco-level obstacles for innovative businesses and research institutes

Vietnam is widely recognized as an economic hotspot in Asia, boasting an average GDP growth rate of 5.3 percent over the past two decades, surpassing that of any other economy in the region. Meanwhile, Vietnam's ten-year plan for economic and social growth from 2021 to 2030 presents an unparalleled challenge for its people, as it aims to achieve middle-income status and emphasize its commitment to achieving both rapid and sustainable growth through the implementation of innovation and digital transformation. Aligned with this goal, the 10-year Strategy is to achieve a 40% share of businesses involved in innovative activities by 2030. The future of sustaining Vietnam's economic miracle, therefore, hinges upon the pivotal role of technology advancement in fostering productivity.

In spite of the country's macroeconomic ambitions, the private sector, which plays a crucial role in facilitating inclusive growth, exhibited a relatively modest productivity growth rate of 2% in comparison to several East Asian economies. The situation is worsen since Vietnamese high-growth firms (HGF) exhibit lower levels of productivity compared to the average ones (Nomura and Kimura 2022). The government, therefore, has been expanding its economic framework to include innovative startups[1] and small and medium enterprises (SMEs), which serve as a source of HGF to drive economic growth (Audretsch, Keilbach, and Lehmann 2006).

However, both types of firms face challenges from both the demand and supply sides inside the National Innovation System (NIS). On the demand side, the government's dependence on intermediary programmes and absence of public equity instruments, such as fund-of-funds, direct investment funds, and co-investment funds, reflected the fragmented financial support. This affects the business's capacity to build minimal viable products for market entry. Regarding the supply side, the network of PRO (Public Research Organisations), which are the main channels through which the government inffuses technological advancements into a country's entrepreneurship ecosystem, has been deemed ineffective. Critics argue that there is limited success in turning patents and research outcomes into commercial products from the supply side of the

[1] Innovative startups" was defined as knowledge- or technology-intensive startup firms have developed (or aim to develop) new-to-market or new-to-world products and/or ser- vices.

entrepreneurial system. An new strategy is needed to create incentives for PROs to actively engage in market-oriented research and identify the innovation needs of enterprises (World Bank 2020).

In summary, the dual challenges required the development of a new policy tool to connect the need for research and development support from small and medium-sized enterprises (SMEs/startups) with the provision of more market-driven research from public research organizations (PROs). International organizations, like ADB (2014) and OECD (2021), have been actively promoting the use of the "**Innovation Voucher" (IV)** in Vietnam. According to OECD (2010), IV is small-scale financial assistance that does not require repayment. The primary objective of these initiatives is to stimulate the adoption of progressive innovations with the backing of public knowledge suppliers such as universities and public research organizations. Plenty of positive effects have been documented globally during the past 15 years. However, the Vietnamese government has shown a lack of assertiveness in response to this proposition, showing cautious approach in the adoption of foreign policy instruments.

1.2 Application of policy transfer and diffusion framework

The OECD and ADB's promotion of IV can be explained through studying policy transfer, which include the dissemination of policies, ideas, and practices from one region to another (D. Dolowitz and Marsh 1996). The theory expands upon previous research on lesson-drawing (Greener 2002; Allen 1994) and enables researchers to analyze contextual elements that influence the actions of actors, such as the internal decision-making dynamics of political systems and the role of agencies (Stone 2012). Indeed, development agencies have been actively engaged in the domain of policy transfer to developing nations, employing either coercive or incoercive approaches by providing consultancy (Morrissey and Nelson 2004). A World Bank report titled "The Road Not Traveled" outlined the process of policy transfer, wherein the organization assumes the role of a knowledge authority and utilizes its international leadership to promote the implementation of policy packages (Galal 2008). The OECD is rather a proactive influnecer in the realm, motivated by the emergence of new economies like China, India or Brazil. The results of policy transfer by OECD, however, are less appealing than the reputation and capacity of both the transfer agents and policy instrument (Clifton and Díaz-Fuentes 2014). The transfer processes among Central European countries faced the same results, with the declared policy objective being weakened (Batory, Cartwright, and Stone 2018). Explaining for such results, D. P. Dolowitz and

Marsh (2000) found signs of transfer failure when contextual factors, such as cultural, political, and economic considerations, exhibit significant differences. An authoritarian state like Vietnam, characterized by its unique governance structure, presents particular characteristics for policy transfer, including the central role of the government and a desire for voluntary approach, as in the meritocracy policy transfer (Duong 2023). For such a reason, Vietnam's cautious approach towards a western policy like IV can be a fertile field to explore further using this framework.

1.3 Research Gap, Question and Research Design

Considering the proven impacts of IV in improving innovation capacity and linkage along with endorsement from international development agencies, it is of my academic interest **to explore its suitability as an optimal policy option for Vietnam and how can it be integrated in the policy framework**. The main research question shall be: "**What conditional factors may support or hinder the policy transfer for Innovation Voucher in Vietnam**?"

This theory has two key goals and shall carry out research in qualitative mode. The first goal of this thesis is to present a comprehensive overview of the usage of innovation vouchers as a policy tool. In order to shed light on IV practices and fulfill the first goal, the thesis intends to use a literature review to extract general understanding of IVs's strength and shortages. I then proceeded to review the policy transfer practices of IV in Montenegro with 2 adjusted periods and different actors involved, to deepen the lesson-learnt process for Vietnam as a late adopter. Second, this thesis seeks to identify the variables that could facilitate or impede the transfer and efficacy of the "Innovation Voucher" programme in Vietnam, taking into account the National Innovation System. The thesis shall operationalized based on factors influencing policy transfer in authoritarian state identified by Duong (2023).

1.4 Contributions

Empirically, the thesis can provide a valuable contribution to the existing literature on Policy Transfer and Diffusion. The existing body of literature on Policy Transfer and Diffusion has been criticized for its biased case selection, notably its deficiency in representing developing countries (Marsh and Sharman 2009) and the scarcity of negative case studies (Common 2001). By initially applying the framework in Montenegro—a case exhibiting both negative and positive outcomes in the transfer process for IV—the thesis anticipates identifying unique factors that either

facilitate or impede the policy transfer for IV. Given the absence of research analyzing the transfer process for IV, coupled with an exhaustive review of secondary research on this instrument's design and its global impact, this thesis is set to be a trailblazer in detailing the instrument. Secondly, it aims to enrich the literature on one-party states, which is currently sparse, by exploring the underlying causes of resistance to policy transfer of IV in Vietnam and/or delineating the unsuccessful attempts at transferring policies from Europe to Asia as specified by Stone and Beeson (2013). Thirdly, as no prior research to the author's knowledge has endeavored to extend the policy transfer framework's utility in forecasting transfer viability, this thesis stands as a pioneering effort, testing the recently introduced research by Duong (2023) on policy transfer in Vietnam.

From a practical perspective, this thesis will provide a detailed exposition of IV and the factors to consider for its potential transfer to Vietnam. In light of the longstanding issues within the financial mechanisms for HGF and Science and Technology (S&T) in Vietnam—topics that have consistently been at the forefront of discussions among Vietnamese policymakers—this study offers critical insights into IV as a prospective remedy for the bottlenecks in the country's NIS. Furthermore, the thesis will delve into an examination of Vietnam's local conditions, with a particular focus on the legal framework and the stakeholders integral to the NIS. Such comprehensive analysis can be leveraged in real-time by policymakers, providing them with a framework to assess the advantages and disadvantages in the context of adopting any forthcoming policy mechanisms in S&T, derived from international knowledge-based organizations and comparative international practices.

CHAPTER 2: LITERATURE REVIEW, THEORETICAL FRAMEWORK, AND RESEARCH DESIGN

2.1 Literature Review

The objective of the literature review is to position IV within Innovation policy mix literature. The first stage involves a review of the Innovation policy mix concept and an analysis of the issue that financial incentives within the policy mix aim to address. Subsequently, it proceeds to explore innovation voucher practices to assess their impact, design, and gaps. The literature review aims to find the rationale for employing IV and several pre-conditions associated with their application.

2.1.1 Innovation Policy Mix within NIS

The concept of "policy mix", a combination of policy instruments that interact to shape the quantity and quality of expenditures in R&D within both the public and private sectors (Cunningham, Bastian, and Nauwelaers 2009) has been a widely accepted benchmark throughout the science, technology, and innovation policy communities since the 1990s. Centering to policy mix concept is the proven link between innovation policy mix and NIS, which policymakers design instruments supporting firm's innovation to mitigate weaknesses in NIS, while they design those supporting research to complement its strength (Howoldt 2024). Meissner and Kergroach (2021) have identified a number of instruments, which include:

- Economic and financial instruments (Grants, subsidies or tax concessions)
- Regulatory instrument *(*Legal tools like Intellectual Property Law that provide 'the rules of the game' for knowledge and innovation processes);
- Non-financial and "soft" instruments *(*Programs that support access to technology platforms, accelerators, mentorship or provision of visibility and recognition (e.g. prizes, awards, technical norms, standards, etc.)
- System-enabling infrastructures (Such as large-scale interfaces, platforms, infrastructures and networking facilities)

These policy instruments, in general, can be utilized as a framework for analyzing Vietnam's NIS with policy mix.

2.1.2. Rationale of using Innovation Voucher

Among economic and financial instruments, Vouchers, a "publicly directed consumption with individualized choice of production and payment" (Valkama, Bailey, and Elliott 2010), serve as an incentive to foster cooperation between industries and firms. Among 13 types of vouchers identified in the research, IV is categorized as a service voucher. Ranging from €2000 to €10,000, as it was considered the modest incentives that do not require repayment. IV are employed to incentivize the implementation of minor innovations by SMEs, with the support and expertise of public knowledge providers such as universities and public research institutions.

Initially designed to support disadvantaged populations in developing nations in Peru and Kenya in the 1990, the concept was later adopted by the Netherlands in 1997 to bolster innovation in SMEs (Langhorn 2014). Ever since, it has spreaded all over the European continent and globally (Canada in 2008, Australia in 2011, Singapore 2009, China 2015). IVs address the issue of limited financial resources and capacities of SMEs, offering two main benefits: output additionality and behavioral additionality. *Output additionality* encompasses two main aspects: the introduction of new and upgraded products, and the continuation of cooperation beyond voucher issuance period. The claim is supported by evaluation in UK (Kleine, Heite, and Rosendahl Huber 2020) and Italy (Sala, Landoni, and Verganti 2016), having direct impacts on SMEs in generation of new products and reducing the time-to-market. They also foster ongoing collaboration, with 30-50% of partners in Scotland, Austria, and Germany continuing to work together after the voucher period (Planes-Satorra and Paunov 2017). *Behavioral additionally*, refers to changes in organizations' research and development operations, as observed in Ireland's evaluation on how the program indirectly increased firm's dedicated time for innovation process time and actively sought additional IV due to favorable outcomes (Whelan et al. 2019). Additionally, IV has also been effective in addressing environmental issues in Western Balkans and promoting sustainable development in China (Zhao and Radziwon 2021).

In general, IV have demonstrated effectiveness as mechanisms for enhancing innovation levels among small enterprises and startups, as well as fostering collaboration between academia and industry. The impacts IV correspond to the presented issues of Vietnam's innovation system and dual macro target ten-year plan for economic and social growth from 2021 to 2030, so providing corroborating evidence for its potential suitability for the country.

2.1.3. Design and characteristics of IV[2]

First, it is important to take into account the design and infrastructure that support IV. In terms of design, IV is a market-oriented policy approach (Langhorn 2014). As a market coordination mechanism (Wang and Tao 2020), the underlying assumption is that startup founders and entrepreneurs possess capacity to determine their own needs and make more effective decisions to identify the most suitable research provider. Moreover, it has been observed that IV serve as a supplementary form of support for other significant programs since it has limited financial impact in supporting the start of business and act best as tool for reducing time-to-market or expanding the scope of R&D activities(Sala, Landoni, and Verganti 2016). Regarding design of IV, it is important to note that IV is classified as a kind of public procurement (Meng, Gao, and Duan 2022), hence necessitating the coordination of public sector organizations such as the Ministry of Business, Finance, Innovation, etc. Nevertheless, researchs on previous European pratices reached the same conclusion that implementation procedure of IV exhibits a lower degree of bureaucracy compared to normal grants (Schade and Grigore 2009; Spiesberger and Schoenbeck 2019).

According to Ahonen (1994), Harisalo (1993) and Levin (1997), there are 3 components any voucher: finance (total budget and voucher volume), regulation (scope and service provider), and information (eligibility requirements for voucher distribution). 3 domains reflect the flexibility in designing IV, which depend upon the country's economic situation, assessment of services value, priority of rising sectors and in-focus technology, etc. However, (Sala, Landoni, and Verganti 2016) identified weaknesses in IV, noting that they performed better on businesses that had already invested time and money in innovation activities. Failures in IV implementation were also attributed to SME's limited understanding and enthusiasm among local SMEs and limiting the types of participants in case of Western Balkans (Luksic et al. 2021)

In general, the IV literature has identified the following pre-conditions for successful IV adoption:

(I) There needs to be a "market" for IV: Startups and SMEs have interest to procure external services in order to enhance their research and development capabilities. Conversely, the supply side is saturated with numerous competitive service providers.

[2] *For a more detailed analysis of IV design, please refer to Annex 2*

(ii) The countrys' NIS prevailing ideology should endorse a "market-oriented" approach and demonstrate a willingness to finance IVs with sufficient budget.
(iii) The university-startup linkage must be supported by other major programs, and IVs should serve only as a supplementary instrument in the policy balance, providing assistance to other major programs or project initiatives.

However, there is no research on how domestic conditions can enable or disable the transfer of IVs, especially related to the background of the country (economic, political and cultural) which can. The limited research on providing a comprehensive description of IVs and strategies for exporting them to emerging regions, such as Vietnam, serves as the impetus for this study to delve deeper into this subject.

2.2 Theoretical framework

Policy transfer is one of the most frequently employed framework in comparative policy to comprehend how the learning process may result in success or failure, enables researchers to analyze contextual elements influencing such process (Stone 2012). Different scholars have categorized those factors (D. Dolowitz and Marsh 1996; Benson and Jordan 2011; Minkman, Van Buuren, and Bekkers 2018). However, distinctive factors of policy transfer in non-western and non-democratic settings have just come to attention recently. For example, Stone and Beeson (2013) research on reasons behind the failed policy transfer from Europe to Asia revealed another factor being differences in political, economic, and historical aspects of cooperation,which made governments prefer lessons drawn from countries in the same region (Obinger, Schmitt, and Starke 2013). For authoritarian state, the involvement of domestic political actors is crucial in determining the extent of transfer, particularly in terms of safeguarding their own ideology, values, and the stability of the ruling regime throughout the process. Duong (2023) research on policy transfer in Vietnam, a developing nation with a one-party system, show that the country tends to prioritize internally-controlled transfer, factoring culture as an element influencing the process. Built on previous scholar works, Duong suggests three groups of factors affecting the policy transfer in Vietnam, including: actor characteristics, feature of policy and contextual factors. Given the research question "**What conditional factors may support or hinder the policy transfer process for Innovation Voucher in Vietnam"**, Duong's dedicated framework for policy transfer in authoritarian state shall be useful in operationalizing this thesis.

Context:

- Institutional factors and path dependency (history of policy environment dense with commitment)
- Socio-culture aspects: Cultural beliefs or public opinion for proposed policy
- Economic: Harmonization with the borrower's economic structure and budgetary resources available to support such policy

Policy:

- Relevance of policy to address key problem: characteristics and reputation
- Legal and administrative structures needed to support the policy

Actors (influencing actor and recipient government)

- Actors reputation
- Receptiveness or openness to collaborate
- Governancesystem

2.3 Research methodology and choice of case study

2.3.1 Methodology

Using qualitative methodology, the thesis will employ desk research and contextual review as its primary methods of analysis. The strategy in use would be exploratory and descriptive. First, the author will conduct desk research into factors influencing IV's transfer in Montenegro, along with review of 3 components of Voucher Framework by Ahonen (1994), Harisalo (1993) and Levin (1997) to test the hypothesis and gain fuller understanding of features of policy transfer for IV. Second, in-depth background mapping for policy transfer in Vietnam will be built upon the 4 mechanisms in the policy mix for innovation by Meissner and Kergroach (2021). To accomplish this goal, the author will conduct a literature review of relevant research (academic publications, policy documents, and existing impact assessments) to better understand organizational structure of Vietnam NIS as well as alternative programs aimed at bridging the gap between research institutes and startups. The mapping will allow the author to evaluate the suitability of IVs as a financial mechanism to Vietnam's NIS problem. Once a full understanding of IV transfer and the Vietnam NIS have been established, the author shall test the framework to identify enabling and disabling conditions for IVs transfer to Vietnam.

2.3.2 Rationale for case study selection

For Vietnam, it is an interesting case to look further into. In the Global Innovation Index ranking, Vietnam has been consistent in being ranked 44th and 48th out of 132 countries/economies in the last two years. The last ten years have seen sustained work driven by international organizations to strengthen inclusive innovation strategies. As a result, National Program 844 on "Enabling environment for innovative startups" lays out the government's network-based initiative to foster a culture of collaboration within the innovation ecosystem by way of a variety of competitions, mentoring programs,...Born and raised in Vietnam, the author has spent over 2 years working in the Ministry of Science and Technology, where she has witnessed the government's efforts to involve underrepresented groups in the pursuit of innovation. Meanwhile, it is to her best knowledge that several non-governmental organizations have proposed a "innovation voucher" as a way for the Ministry of Science and Technology to integrate inclusive innovation, hoping to remodel its "next-to-nothing" NIS (Klingler-Vidra and Wade 2020). However, none of the policy reports and proposals has been detailed enough for the government to properly evaluate the possibilities of implementing such programs and implementing such initiatives. Without practical evidence on how this mechanism can be a good fit for Vietnam, it would be challenging to advocate for future changes. This study, the author says, would hopefully allow policymakers to be more familiar with this novel policy vehicle.

The author refers to Montenegro for 2 reasons. *First,* the country is a typical Western Balkan country with practices of carrying out Innovation Voucher over a decade, laying more grounds to better reveal conditional factors interfering with the adoption of a “Western created policy” using a “Western framework” to a country in the South. *Second*, Montenegro, despite the rather low ranking in Global Innovation Index, has received IVs as policy transfer lesson twice (Slovakia by OECD support and Serbia by EU support). As a mid-level performer on innovation policy in the region, the country brings dynamics to the lesson – learnt, since the first few years of piloting focused on the processing industry failed due to lack of interest from enterprises. The comeback of IVs in Montenegro after the failure period, along with a strengthened NIS, shall offer robust lessons to understand the conditions to adopt IV successfully.

2.3.3 Limitation

The author's initial plan is to conduct interviews with Vietnamese officials, who shall be engaged in NIS and startup-related policy making processes. However, due to the country's political earthquake making several high-level leaders from National Assembly to Ministerial and Local level stepping down during continued scrutiny of corruption, policy-makers are less open towards interview and opinion-sharing. Moreover the time difference between Spain and Vietnam has made it more challenging to set up interviews in due time. Therefore, the authors rely mostly on context analysis from legal documents and previous speech in media channels to gather opinions about the topic.

CHAPTER 3: MONTENEGRO

In Montenegro, IV was implemented twice, with a brief pause due to the program's failure with only four firms participating from 2015 to 2017. This was in contrast to the successful pilot programme that provided assistance to 12 enterprises in 2012 (Batory, Cartwright, and Stone 2018). The latest evaluation in 2021 of the EU's assistance to Montenegro's innovation strategy found that December 2017 was a pivotal year for the country (Bologinin 2021). This is because the implementation of the Smart Sustainability Strategy (S3) had a direct influence on the combination of policies related to innovation. Therefore, this chapter conducted a comparison of policy transfer between two different time periods: 2006 to 2017 and 2018 to the present.

3.1 Context

Regarding institutional factors, both periods witnessed Montenegro's transition politically and economically.

Montenegro gained independence in 2006 and has been actively working towards becoming a member of the European Union since 2011. As part of this process, Montenegro has enacted more than 20 business-related regulations that align with EU standards (US Department of State 2014). Montenegro's goal to becoming the 28th member by 2028 remains unwavering, and the process is ongoing unitl this day (EESC Press Unit 2024).

Regarding economic climate, the first period was significantly affected by the 2007 economic crisis. This was mostly owing to the country's reliance on substantial inflows of direct foreign investments, which resulted in low productivity growth (Popovic 2010). By 2023, the country has been diligently working towards economic reform, focusing on the service, export sectors and has been recorded to be on fast growth (EU 2023).

SME was recognised as a key component of the economy, and Montenegro government created SME Development Directorate (SMEDD) to implement annual action plans based on the 2011-2015 SME development strategy (EU 2017). In 2017, Montenegro implemented a scientific research strategy that was predicated on the EU Horizon 2020 Policy Support Facility (PSF). Then, Montenegro invited EU experts to help design the "Programme for supporting innovative startups in Montenegro 2019-2021" in response to the PSF (Bologinin 2021). Additionally, S3 was developed. Following Serbia's example of implementing a sectoral cross-cutting innovation programme, the S3 influenced the establishment of the Innovation Fund. Given

such shift, in 2018, domestic R&D expenditure amounted to EUR 23.5 million (0.5% of GDP), a 56.7% increase from 2017 (Mirkovic 2020).

3.2 Policy characteristics

The summary of IV scheme is as follow :

	Pilot program 2011[3]	Adjusted program 2022[4]
Goal	(1) Strengthen capabilities of export-oriented SMEs in Montenegro; (2) Increase the use of consultancy services by SMEs in Montenegro; (3) Improve the competitiveness of exporting SMEs and increase their innovation potential. These three objectives aligned with international practices in Slovenia, from where the lessons were drawn from.	A simple, fast and efficient financial incentive designed for micro, small and medium enterprises in order to raise the innovation level of their products and improve their competitiveness in the market by means of specialized services of research and development institutions.
Finance	4000 EUR with 25% contributions from consulting service providers	8000 EUR with maximum of 80% contributions by scientific research institution
Regulation (service provider criteria)	Database of international locally registered companies and local ones registered in the BAS program supported by EBRD for	Scientific research institutions registered within the list by the Ministry of Education, Science, Culture and Sports

[3] Summarized from OCED Project Insights on Implementing a Pilot SME Voucher Scheme in Montenegro 2013 (Fexer, Revenco, and Ott 2013)
[4] Summarized from Montenegro's Mannual for Innovation Voucher Program 2022 (Innovation Fund of Montenegro 2022)

	restructuring of the Montenegro economy in 2007	
Information (eligible recipient)	Export-based companies	All micro, small and medium enterprises under Article 6 of the Law on Accounting No. 145/2021 as of 31 December 2021, which also have working domain within 4 clusters of S3
Organization of coordination	Directorate for Development of SMEs	Innovation Funds

Table 1: Summary of Montenegro's IV

Both the pilot program and the current program have distinct objectives to achieve, and therefore, they serve different beneficiaries. This is a consequence of macro-level policy planning and the central goal of NIS. The rationale behind the adoption of IVs in 2011 was rooted in the lessons learned from Slovenia, the budget increase resulting from SMEDD, and the lack of a private sector market for funding (Fexer, Revenco, and Ott 2013). More importantly, SMEDD predicted that IV would enhance the policy mix within the strategy and contribute to the establishment of a consultancy market. Other alternatives were considered, including direct financing of training programs, public provision of consultancy services through business centers, and tax deductions that prioritize R&D. Despite their short-term impact, IV stood out for their effectiveness in providing demand-led consultancy and training support to relevant firms, along with their positive supply-side stimulus effects. In summary, IVs appeared to be the panacea of the time, as they addressed a variety of objectives related to the development of the innovation ecosystem and the business sector.

The program resumed only after the Montenegro Innovation Fund was established in 2021. The Innovation Fund is the solution to financing S3, preventing overlapping funding, and fostering the absorption of EU funds, a lesson that Montenegro learned from the Science Fund in Serbia (Bologinin 2021). IV is one of four arms of the Innovation Fund (WBC-RTI 2022), which consist

of ten program lines[5]. These lines vary from supporting educational programs to reinforcing the culture of innovation, bolstering startups, and protecting patents. Therefore, this macro-orientation results in modifications from the 2011 program to the profile of eligible participants, a dedicated budget of 100,000 EUR to run the program, and an integrated approach from the top-down design of NIS. The World Bank's 2015 inauguration of Technolopolis, a science and technology park, and the 2017 establishment of another science and technology park on the University of Montenegro campus have further bolstered this period's support. Together, they created a potential hub for entrepreneurs who are interested in participating in the program.

3.3 Actors

The successful introduction of IV in 2011 owes credit to international development cooperation partners. Specifically, the OECD, a key advocate for IV, implemented the Regional Competitiveness Initiative, a three-year EU-funded project. The project aimed to assist regional governments in developing sustainable economic policies that promote innovation and human capital growth. During a roundtable meeting in 2010, Montenegro explicitly sought help with IV design and implementation (Jahic 2011). The OECD's reputation as a knowledge powerhouse and its extensive experience in policy transfer for the innovation mix made relying on its support a high priority, with the expectation that it would reform the underdeveloped innovation policy mix. In the post-2018 era, the policy transfer was greatly impacted by EU-specialized technical agencies. The PSF document, which assesses Montenegro's innovation levels, was frequently used by policymakers. This is not altogether unexpected, given Montenegro's aspiration to become an EU member (Bologinin 2021). Also, in 2008, Montenegro actively engaged in the EU's Competitiveness and Innovation Programme with the support of Germany, which facilitated the alignment of Montenegro's market regulations with the EU Internal Market requirements. Given the fact that IV, which was initially popularized in the Netherlands, had been adopted by key EU players such as Germany and Austria. As a result, Montenegro's enthusiasm for IV can be interpreted as a political incentive to facilitate its accession to the EU.

[5] See more at https://fondzainovacije.me/en/home/

3.4 Conclusion

The two periods of IV transfer in Montenegro confirm all three assumptions from the literature on voucher schemes and reveal additional aspects related to policy transfer. Here are some key points to emphasize:

First, Political Context and Actors' Influence is utmost important.

- Montenegro's regulatory framework was built from scratch after gaining independence. This deliberate effort allowed the country to shape its new business-oriented NIS, including the adoption of innovation vouchers.
- Montenegro's strong desire to become an EU member played a crucial role. The country actively sought to harmonize its business regulations with EU standards, relying on EU knowledge-based authority.
- While knowledge-based and development agencies like the OECD and World Bank provided support (especially in setting up basic facilities within the NIS), Montenegro maintained its own autonomy in the learning process through choice of IV's scope.

Second, preference are given to learning from similar situations and neighboring countries:

- IVs serve as an economic-related mechanism, and Montenegro demonstrates a tendency to learn from countries facing similar challenges. For instance, Montenegro looked at Slovakia in the first period and Serbia in the second. This pattern suggests that the adoption of similar measures in neighboring countries can positively influence Montenegro' openness to policy transfer.
- Having a dedicated budget for IVs further supports this argument. When neighboring countries successfully implement similar policies, it provides evidence of feasible transfer and encourages Montenegro to explore policy transfer opportunities.

Third, IV design should be placed within bigger picture of NIS:

- Beyond reputation and effectiveness, policy design must account for domestic conditions with a deeper analysis of both beneficiaries and potential stakeholders.
- Additionally, Montenegro's government strategically linked IVs to other major programs. Before reintroducing IVs, they established macro strategies to strengthen upstream R&D system along with the creation of the Innovation Fund, which runs various programs supporting business-research collaborations, further reinforces the importance of long-term support.

- While IVs provide a simple and small grant, their significance lies in complementing a broader policy mix.

CHAPTER 4: VIETNAM NATIONAL INNOVATION SYSTEM (NIS)

Since IV is a specific and "micro-targeted" mechanism, the overview can shed light on the current macrostructure of the NIS and identify stakeholders that might be relevant to being involved in the policy transfer of IVs. The chapter will be divided into two sections. The first one will describe the evolution of Vietnam's NIS. The second one will incorporate an innovation mix with stakeholder analysis to draw a conclusion on the suitability of IV in Vietnam's problem.

4.1 Evolution of Vietnam Innovation Policy

Vietnam has undergone four decades of remarkable reform since the start of the Doi Moi period in the 1980s, transitioning from a centrally planned economy to a socialist-oriented market economy. The Vietnam Innovation Policy has undergone five phases of evolution, as illustrated in the figure below. The centric role of government in navigating the NIS began to manifest in the era of global integration and S&T reform, as it evolved from a fragmented NIS system in the 1980s to a government-coordinated NIS from 1996 to 2010.

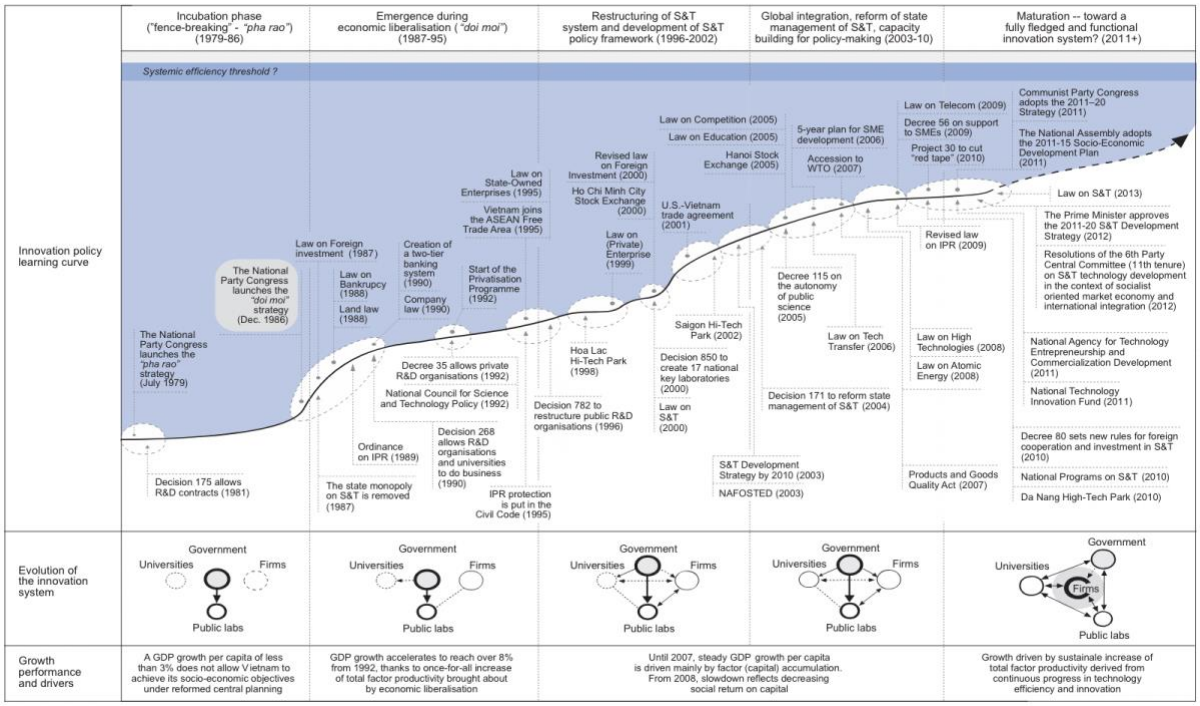

Figure 1: Viet Nam's NIS: Institutional Reform

(*Source: OECD and The World Bank 2014)*

From 2011 onwards, with the centric role of firms in innovation policy planning, Vietnam has entered a new phase - a more matured NIS. The Resolution of the 13th National Congress of the Communist Party of Vietnam affirmed that one of the primary tasks and solutions to implement the 10-year Socioeconomic Development Strategy (2021-2030) is the vigorous development of S&T, fostering innovation to create breakthroughs, enhance productivity, quality, efficiency, and competitiveness of the economy.

Continuing down this pathway, the latest Decision No. 569/QĐ-TTg, dated May 11, 2022, on a Strategy for Scientific-Technological Development and Innovation until 2030, has shifted the focus to support business innovation and technology adoption. As the firm continues to be at the core of Vietnam NIS , the Decision delineated specific tasks to promote S&T through business and and to develop the science and technology market, Part 2, Article 1.d). The Decision also delineates the goal of enhancing the national, regional, and sectoral NIS by utilizing intermediary and supporting organizations, the innovation center network, the innovative startup network, and high-tech parks to foster innovation (Part 2, Article 1.b).

Overall, the Vietnam government maintains a firm-centric approach to the NIS through its macro-policy planning, with the objective of enhancing the technology absorption and innovation capacity by intensifying intermediary activities in the science and technology market. This indicates a transition from R&D-based innovation, which has a restricted emphasis on non-R&D-based business innovation, to the support of innovative firms and SMEs.

4.2 Innovation policy mix in Vietnam's firm-centric NIS

Utilizing the Meissner and Kergroach (2021) 's framework in analyzing NIS, details mapping of each type of policy mechanisms targeting at need for research and development support from SMEs/startups and market-driven research from public research organizations (PROs) can be mapped out below:

4.2.1 Economic and financial instrument

Regarding economic and financial instruments, the government support for SMEs/startups and PROs have been limited to loans, taxation and grants.

For SMEs/startups, SME Development Funds (SMEDF) are the main means by which entrepreneurs gain access to loans at preferential rates. In 2014, SMEDF was established with a charter capital of 2 trillion VND from the state budget and is overseen by the Ministry of Planning and Investment (MPI). Nevertheless, the disbursement rate is relatively low (600 billion VND) due to the organization's efforts to distribute funds to SMEs through five commercial banks in 2016. SMEDF has been subjected to criticism for its stringent requirements from both the government and banks, which have made the Fund less effective than anticipated (Vichyanond 2023). Before that time, 2011 was a pivotal year with the establishment of the National Technology Innovation Fund (NATIF) under MOST, which served as an implementing entity dedicated to providing funds for commercialization and support to high-tech SMEs. Nevertheless, NATIF continues to encounter difficulties in evaluating the cost of new technology and addressing the issue of how the financial appraisal requirement for SMEs in Vietnam is not met (Cao 2022). Regarding taxation, startups and SMEs are subject to the same rules, although the Law on Supporting SMEs in 2018 officially establishes the legal status of startups. . The Law also contains a limited provision that specifically allow funding for advisory support for tax and accounting concerns for SMEs. Furthermore, there is a lack of taxation measures to encourage startups to engage in collaboration with PROs. Startups and SMEs seeking private funding from venture capital investors do not receive any tax deductions or discounts for risk capital investments. As a result, investors lack the motivation to support investments with higher levels of risk in startups. Public agencies and funds are prohibited from participating in VC funds by the Law No. 69/2014/QH13 on the Use and Management of State Capital Invested in Manufacturing and Business Operations of Enterprises. This leads to a limited number of domestic VC and drives founders to seek finance in Singapore and other countries in the area. This also prompts startups and SMEs to form a foreign entity abroad to ease the funding process (Vandenberg, Hampel-Milagrosa, and Matthias 2020). While this facilitates their access to capital, it poses a challenge for them to commercialize research findings from any PRO, which will be explained in the next section.

For PRO, government grants, facilitated by the National Foundation for Science and Technology Development (NAFOSTED) under MOST, serve as the primary means of funding. NAFOSTED, which functioned as both a State financial institution and a public non for-profit business organization, has faced persistent budget constraints over the past 15 years, despite its

aspirations to broaden and diversify its funding options for young researchers – said Former head of the NAFOSTED (Vietnam News 2024a).

In 2013, the World Bank's "Vietnam Inclusive Innovation" initiative was implemented to bridge the funding gap in the supply and demand sides NIS. This initiative aimed to provide matching grants to enable SMEs in scaling up, commercializing, and sustainably producing inclusive technology. Nevertheless, the execution was hindered by an a deadlock caused by factors such as frequent changes in government leadership, insufficient enforcement by the MPI, capacity limitations of NAFOSTED, and inadequate collaboration between the MPI and the MOST (Twigg 2018). Ultimately, not a single grant was allocated to SMEs, resulting in the termination of the program after a duration of 5 years.

In summary, SMEs/startups, and PROs have limited access to financial mechanisms due to small budgets, stringent requirements, slow distribution rates, and an unencouraging taxation system. Efforts to create a linkage system between both types of organizations are nowhere near finished, with previous pilot programs concluding with unsatisfactory outcomes as a result of inadequate legislative infrastructure and insufficient coordination with the relevant ministries.

4.2.2 Regulatory instrument

Vietnam's legislative framework for Intellectual Property Law is hindered by conflicting policies and inconsistencies, which impede the activities of technology transfer between PRO and startups/SMEs. The primary concern lies in the inconsistent handling of research findings funded by the public, which is contingent upon whether IP is produced within three years of project completion (Law No. 07/2022/QH15) or beyond that timeframe (Decree No. 70/2018 ND-CP), as shown in the figure below. Additionally, while most of Vietnamese startup set up foreign entities in Singapore to get the funding from VCs easier, PRO are prohibited to transfer their IP to a foreign-registered startup.

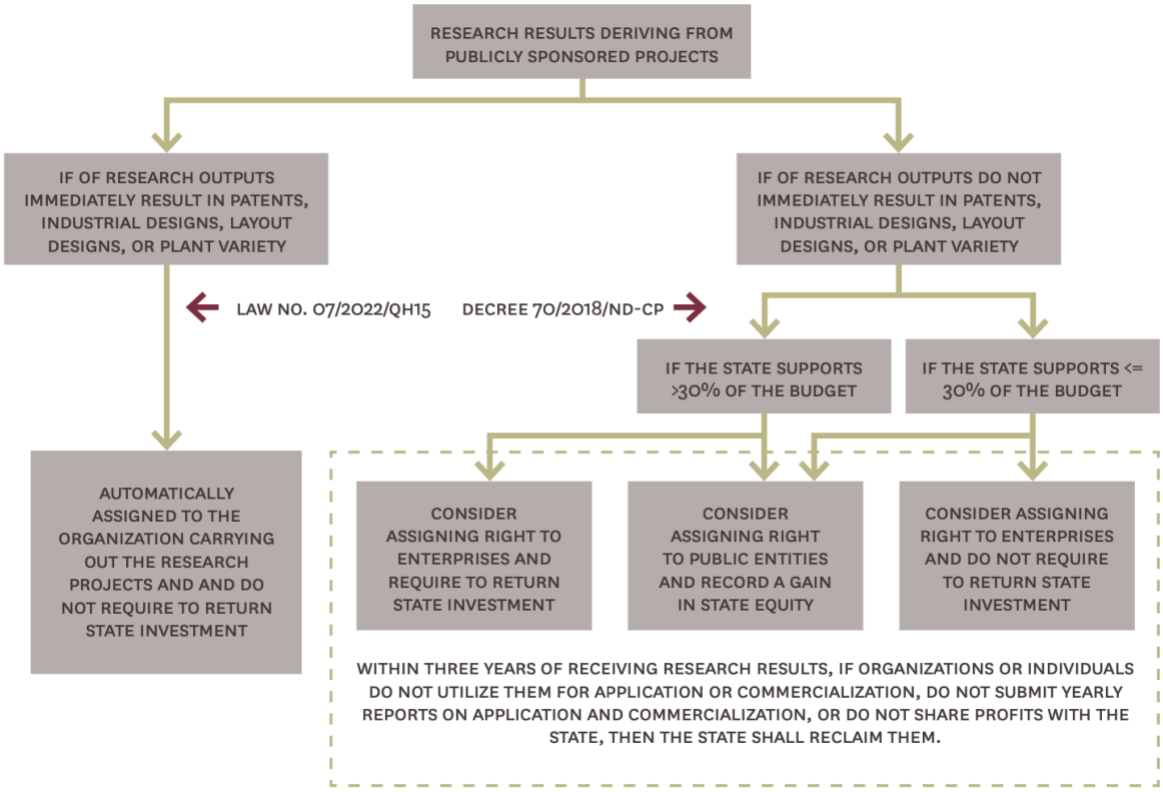

Figure 2: Regulation regarding ownership of research from PRO

(Source: World Bank 2023)

Moreover, there are rules disincentivizing PRO's participation in business collaboration. First, Decree No. 70/2018 ND-CP also lists certain scenarios in which institutions and researchers must share part of the revenues derived from their IP with the government, which makes the process of collaboration more complex and unappealing. Second, the Enterprise Law (2020), the Law on Public Employees (2010), and the Law on Anti-Corruption (2018) prohibit government employees from managing private businesses, despite their role as researchers at PRO and genuine interest in engaging in the business's operation. Noted that the Law on Science and Technology (2013) and the Law on Higher Education (2018) permit public research institutions and universities to establish enterprises, including startups. Therefore, in both cases, employees of PRO cannot work directly for startups they founded or on the boards of startups they collaborated with to better manage the commercialization process.

4.2.3 Non-financial and "soft" instruments

The Vietnam government's key "soft" instrument is the "Initiative for the Startup Ecosystem in Vietnam until 2025" (Program 844), which was endorsed by the Prime Minister on May 18, 2016 and subsequently amended in 2021 (Decision 188/QD-TTg). The initiative was established with the aim of creating an enabling environment for startups between 2016 and 2025, with activities as: (1) Setting up a national startup ecosystem portal; and providing (2) 42 million USD (39 million EUR) for 800 startup projects and 200 startups, including 50 enterprises financed with venture capital. Noted that the activities are partly coordinated by National Agency for Technology Entrepreneurship and Commercialization Development (NATEC) and the budget is governed by MOF. So far, over 8 years, the Program has provided financial assistance to more than 80 incubation and acceleration programs, thereby contributing to the development of the intermediates market. Furthermore, 60 out of 63 provinces in Vietnam have devised strategies to execute 844 Programs at the local level (MOST 2024).

Since 2016, the ISEV board has been in charge of organizing TECHFEST, the largest publicly funded event for startups/SMEs. The event serves as a platform to not only increase the visibility of innovative businesses, but also facilitates connections between startups/SMEs and possible research groups and financing sources through tech demos and matching events. Some other noteworthy events that receive public support are Startup Day, Vietchallenge, Vietnam Venture Summit, and Vietnam Frontier Summit (Pham and Hampel-Milagrosa 2022).

4.2.4 System-enabling infrastructures

Regarding platform and facilities to connect startups/SMEs. Vietnam government has created both digital platform and face-to-face infrastructure.

Decision 3084/QD-BKHCN dated October 2019 has established the framework for the National Innovation Startup Portal (NISP). Program 844's Office was tasked with setting up NISP with the expectation that it would serve as a digital repository of information about startups in Vietnam. This can serve as an online market showcase to match startups and SMEs with relevant PROs, however, the portal is not active after 6 years of development. Given the ineffectiveness of NISP, the government established Decision 976/QD-BKHCN on Investigation of Innovation in Enterprises in 2022, aiming to create a framework for data collection on innovation in Vietnam. Specifically, it developed a Business Innovation Survey to determine and monitor the development

of Vietnam's startup sector. This data is to be used to develop future policies and create input for NISP.

Meanwhile, infrastructure for PROs and Startups/SMEs were set up in three regions across the country, with Hoa Lac Hightech Park in the North, Da Nang High-tech Park in the center, and Saigon Hightech Park in the South. So far, Saigon Hightech Park has attracted 160 projects, resulting in a total investment of US$12 billion. This is four times the amount of investment in Hoà Lạc Hi-tech Park, which has 102 projects and a total investment of $4.04 billion (Vietnam News 2024b). In early 2023, Hoa Lac Hightech Park was transferred from the management of MOST to the Hanoi City Council, a move that is consistent with the operational structure of Saigon Hightech Park to better attract investment in the areas of urban development.

Moreover, the National Innovation Center (NIC) was established according to the 2019 Decision No. 1269/QD-TTg. As part of its role as a startup center under MIP, the NIC provided a 20,000 sq. ft. space where fledgling businesses could settle and collaborate with global tech giants like Google and Amazon. Firm support measures, such as tax exemption for land leasing in high-tech zones and taxes on raw materials, supplies, and components under specific situations for tenant startups, are also applied for firms residing in NIC, as provided in Decree No. 94/2020/ND-CP in 2020.

4.3 Stakeholders

4.3.1 Public sector

Regarding public sector, the mapping of all stakeholder governing S&T policy can be found below:

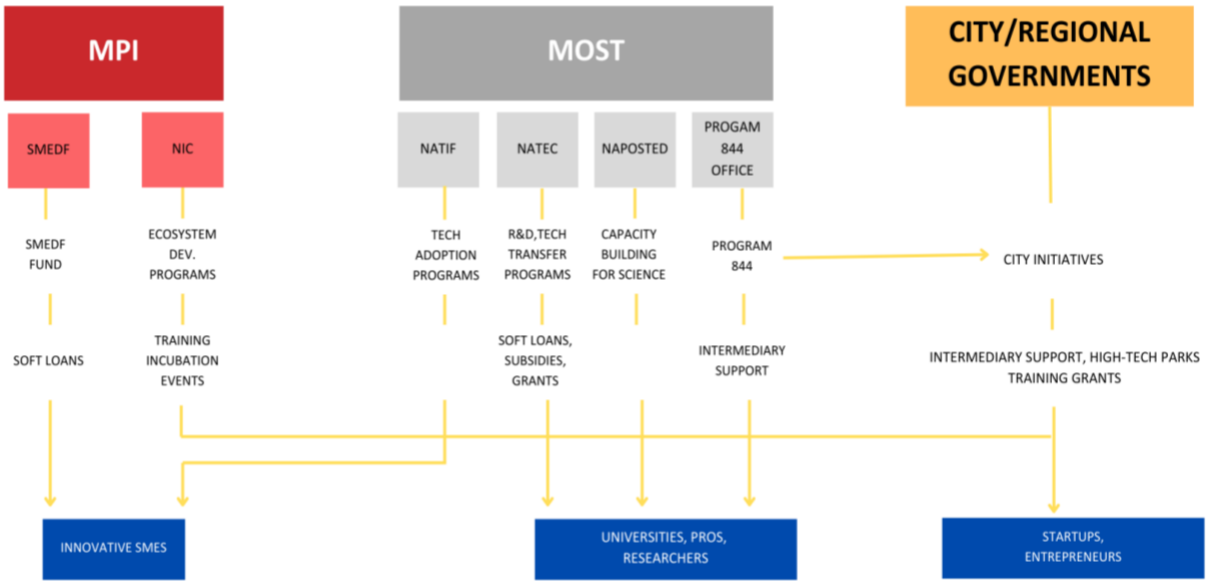

Figure 3: Stakeholders mapping of Vietnam's NIS

(*Created by author*)

Under the Orientation of Communist Party of Vietnam (CPV), The National Assembly and Vietnam Government are the highest authority responsible for authorizing macro-legislation and the focus of NIS. As a result, the management of S&T policy is a shared responsibility among three distinct primary ministries (MOST, MPI, MOF), a variety of other agencies, and provincial governments throughout Vietnam.

MOST has been entrusted with the responsibility of overseeing the management of S&T activities and is recognized as a prominent actor in the strategy. In this role, MOST is responsible for the coordination of the budgetary process, formulation and monitoring of the S&T strategy's implementation. Nevertheless, this arrangement does not seem to be effective when the policy's scope is broadened to innovative SMEs/startups (Klingler-Vidra and Wade 2020). Despite the absence of MOF and financial support from donors, such as the case of the Inclusive Innovation Project by the World Bank above, the function constraint of the agency under MOST and its limited influence to faciliate inter-ministerial collaboration with MPI is a concern. In reality, the MPI is increasingly responsible for the development of policies and incentives to foster innovation in Vietnam, as evidenced by the establishment of the NIC. The Program 844, NATIF, and NATEC

from MOST were out-powered by the responsibility and accountability of NIC, which possesses a more independent budget and a broader network with international actors and the private sector. In general, the policy systems that are intended to facilitate the connection between SMEs/startups and PROs are insufficient. There is no single coordinating body, which results in a competition between various ministries and agencies.

4.3.2 Startups/ SME

As of June 2022, the number of SMEs in Vietnam accounts for 98% of the total number of operating enterprises in Vietnam and 50% of the GDP (approximately USD 196 billion), according to the 2022 Statistical Yearbook of the General Statistics Office of Vietnam.As an economy characterized by SMEs, the country boasts a greater number of businesses than other renowned startup hubs, including China and India, with a total of 3000 entities and four unicorns (Pham and Hampel-Milagrosa 2022). Furthermore, the nation has experienced an unprecedented increase in investments in this type of businesses, which totaled $1.4 billion in 2021.

In 2024, the Vietnam Investment and Tech Report, a publication sponsored by NIC and MPI, discovered that Vietnamese tech businesses received a total investment of $529M in 2023, a 17% decrease from the previous year (Do Ventures and NIC 2024). The statistics indicate a persistent downward trend that has been influenced by the challenging global economic conditions. Moreover, Vietnam's SMEs capabilities are lagging. World Bank (2020) found 75% of surveyed SMEs shared uncertainty about the returns to invest in technologies, which made them more reluctant to invest in R&D. Altogether, this has further underscored the challenges faced by SMEs/startups in securing funding in the upcoming year.

4.3.3 PRO

In 2023, Vietnam's investment on S&T amounted for 0.82% of the overall State budget's expenditure (VNA 2024a). This represents a decrease from 1.17% in 2017 and highlights a continuing disparity in S&T expenditure compared to other countries (1.96% in China, 2.6% in Singapore, and 1.25% in Malaysia). This trend is in stark contrast to the country's substantial and expanding capacity forS&T. According to (Luong, Nguyen, and Tran 2023), there are 4,000 science and technology organizations, 3 national high-tech zones, 13 high-tech agricultural application zones, and 8 information technology concentrated zones. The number of research

personnel has increased to approximately 67,000, with a diverse network of aforementioned PROs. The most noteworthy aspect of Vietnam NIS is that the majority of organizations are state-funded. In light of the small budget for S&T, the government issued Decree No. 115/2015, which lays out the legal foundation for the transformation of PRO from traditionally managed institutions relying on the state budget to independent, market-driven entities that self-finance. This is an attempt to broaden PROs' access to capital and boost market-driven research.
In terms of the excellence of S&T, it can be quantified using the Global Innovation Index. In 2023, Vietnam ranked 46th in the Global Innovation Index (GII) among 132 economies, a 26-place increase from 2012. In terms of commercialization capacity, it is crucial to examine the data on IP certificates. Huu Xuyen, Lan Huong, and Thi Lan Huong (2020) discovered that the number of patent applications submitted by Vietnamese has not increased significantly over the past decade, remaining at approximately 10% of the total number of patent protection applications. Although PRO are the primary recipients of state funds and the conduit for the integration of technological advancements into the entrepreneurship ecosystem, the average number of patents granted to them is only approximately 100 per year.

4.4 Conclusion

In general, Vietnam has legitimate demands and enabling conditions for IV. The NIS's symptoms accurately matched with diagnosis by the ADB (2014) and OECD (2021), who endorsed the transfer of IV to Vietnam as a modest financial instrument. *First*, Vietnam implemented a firm-centric strategy in the development of its NIS, with a defined plan for increasing its funding for S&T and an emphasis on high-growth companies. The macro strategy analysis suggests a situation that is similar to that of Montenegro, with a strong commitment from all levels of government to disseminate innovation within firms through a variety of channels. Despite the existence of distinctive funds (SMEDF, NATIF, NAFOSTED) for both innovative startups/SMEs and PRO, the financial mechanisms are restricted to grants/loans. There are no alternative mechanisms to replace future-created IV, even tax-wise ones. *Second,* a variety of programs have been implemented to facilitate the linkage between PRO and entrepreneurs by utilizing onsite infrastructures and soft instrument approaches, including the Program 844, NIC, and high-tech parks. The long-term effects of IV implementation can be facilitated by the enabling ecosystem that these infrastructures have established. *Third,* Vietnam satisfies the market

conditions by having a good base of businesses that require financial assistance to better their products through R&D, as well as a robust market situation for PRO with a low commercialization rate. Consequently, it is reasonable to assume that IV is compatible with the Vietnam NIS and is capable of resolving the current supply-demand mismatch in the NIS, as similarly pointed out in World Bank's report (2020). Nevertheless, the complex NIS, which is characterized by the involvement of numerous ministries and demotivating IP regulations, may impede the adoption of IV.The policy transfer model will be further tested in Chapter 6.

CHAPTER 5: MODEL TESTING

5.1 Contextual factor

5.1.1 Institutional factors and path dependency

Vietnam is a one-state party authority, presenting both strengths and disadvantages for the policy transfers process. Regarding strength, the absolute power monopoly of CPV, which has historically played a critical role in the successful long-term economic performance by ensuring political stability (Vu 2014), can help guarantee consistency during the learning and implementation process of new policies, such as IV. Furthermore, Vietnam's extensive history of colonization has established a legacy that facilitates the policy transfer process from the West. The colonial history, as noted by Duong (2023), fosters a cultural tolerance and an openness to new ideas, as it is perceived that Western things are more advanced than domestically created ones. The government is accustomed to the practice of overseas learning, as the country has a history of both voluntary and coercive transfer.

Nevertheless, the CPV's ultimate power has ensured the country's ideological autonomy, even during periods of economic reform. Since the 1980s, Vietnam has consistently received the highest amount of development aid (Bony-Cisternes 2019). In S&T, the World Bank has played a crucial role in promoting regulatory growth in this area, giving evaluation reports to project initiators. Bony- Cisternes also found Vietnam to be motivated by Asian success models such as Japan to pursue its own policy development path, despite its dependence on donors, which is a common trait with African countries. For instance, in 1997, the Vietnamese government declined to World Bank's conditional financial support on structural reforms in the public sector and trade-related issues. The MPI issued a resolute statement, stating, "Reforms cannot be bought with money; no one is going to bombard Vietnam to force it to act." The premise of this thesis, which posits that IVs have been a mechanism in-proposal from international knowledge-based authority for years but have not been adopted, can be partially explained by the full control of CPV in ideology adoption.

In the context of Montenegro, the involvement of knowledge-based authorities such as the EU, OECD, and World Bank was crucial in the establishment of IV, along with the country's political will to embrace the project. Thus, Vietnam's centralized structure with single party and its historical context can lead to both ease in maintaining stability and willingness to adopt policies

from other countries, while also having reservations due to its commitment to ideological independence.

5.1.2 Socio-culture

Vietnam's socio-cultural customs present both obstacles as well as benefits for the transfer of IVs. The country's Confucian epitomize the importance of education. An tool such as IV, which bridges the gap between knowledge-intensive organizations and businesses, would be highly appreciated. Examples can be seen in previous successful programs addressing the same issues, such as NIC or Program 844, serving as means to encourage collaboration between intermediaries and startups/ SMEs.

Conversely, Confucianism is linked to conservatism and collectivism, particularly in economic matters. In the unsuccessful Inclusive Innovation Project run by the World Bank, which included matching funding, the government requested greater independence in determining which subprojects could be classified as innovations and who should benefit from them. Indeed, this is a characteristic of the Confucian state, which is widely regarded as being more cautious than many Western states in handling public expenditure since it's people's tax contribution (Nghia 2005).. Therefore, the distribution speed of funds like IV is expcted to be slowed down, similiar to factors mentioned in the NATIF and SMEDF cases. Additionally, there shall be limited acceptance of a simplified-grant system for IV, like the Netherlands case, where distribution is based on a first-come-first-serve or lottery basis (Cornet, Vroomen, and Steeg 2006).

5.1.3 Economic

Since the transition to Socialist-oriented market economy, the reform has motivated both public-owned enterprises and the private sector to be more competitive and productive to enter the globalization period. Positive signs with Vietnam's rapidly expanding economy, can ensure great demand for IV from private sector. At the same time, the robust GDP growth ensure a long-term raise in state budget revenue, as seen in 6% growth rate from 2006 and 2015 (World Bank and Government of Vietnam 2017). Nevertheless, the lack of financial resources allocated for S&T poses a significant obstacle to the implementation of IV. Despite the target stated by Decision No. 569/QĐ-TTg 2022 to increase spending on S&T, the current downward trend is a discouraging sign for any newly established financial instrument. Though only the small amount is needed,

which typically amounts to roughly 100,000 EUR in the case of Montenegro, the existing inadequate budget would intensify the pressure to convince the National Assembly or Prime Minister's Office to approve the implementation of an additional financing mechanism such as IV.

5.2 Policy characteristic

5.2.1 Reputation and simplicity

Overall, the distinctive feature of IVs is suitable to solve the current gap in Vietnam NIS and guarantee high acceptance level due to its feature, including simplicity in design and good reputation.

First, as established in Chapter 4, IV is compatible with the Vietnam NIS with enabling conditions such as: market-oriented NIS for macro policy planning, several complementary programs in long-term. IV fit as a solution to current supply-demand mismatch in the NIS with no alternative financial instrument to bridge to gap and strong bases of startups/ SMEs and PRO to pilot.

Secondly, IVs have a positive reputation as both national and regional practices globally, with causal evidence to support their structural long-term impact (Balabay, Geijtenbeek, and Jansen 2019) on the behavior of firms and a positive short-term stimulation effect on innovation activities among SMEs (Cornet, Vroomen, and Steeg 2006; Bravo-Biosca 2019) in Europe. China, a neighboring country that shares a similar ideology with Vietnam, has already implemented IV since 2012 and duplicated to 139 other cities. Practices in the country found that IV has a significant impact on SMEs in enhancing their innovation outputs (Xu and Guo 2023). The geographical proximity, similar insitutional settings and established success of an Asian authoritarian regime like China (Obinger, Schmitt, and Starke 2013; Duong 2023) can contribute as an enabling condition for better tolerance towards IV transfer in Vietnam.

IVs is considered relatively transferable due to its simplicity and flexibility in design. Regarding regulatory, the current inventory of registered PROs under MOST can be utilized. For the information dimension, which encompass the criteria for filtering startups/innovation SMEs, the legal status of startups has already been established by the Vietnam SME Law 2017 along with the on-building NISP. Moreover, the government maintains extensive lists of startups that have participated in National Program 844 and other events, including TECHFEST, Vietchallenge, and Vietnam Venture Summit, which serve as a good database for IV's implementation. Finance,

although it is a matter of flexibility, can be a complex aspect. As previously mentioned, NATIF has consistently identified the challenges of assessing the value of new technology. The IV value, which must be determined by the cost benchmark calculation by service providers like PRO, will encounter similar issues.

5.2.2 Legal

In contrast to the facilitating conditions for transfer found in characteristics and design of IV, the complementary legal and administrative structure that supports its transfer can be problematic due to the complex role of stakeholders in NIS. In addition to the overlapping and complex structure of NIS, there is no government agency with the capacity to provide funding in the form of vouchers. In the case of Montenegro, a dedicated agency is responsible for coordinating the implementation of IV during both periods, Innovation Fund and SMEDD. In Vietnam, SMEDF, the primary funding body for SMEs and startups, is unable to serve as a coordinating agency through program implementation and is limited to channelling funding through commercial banks. The NATIF is responsible for the provision of funding for business's R&D, as well as the engagement in the technology commercialization. Nevertheless, the complex criteria of the fund approval process already set obstacles for SMEs to access the funding, let alone innovative startups that usually lack collateral assets (Pham and Hampel-Milagrosa 2022). NAFOSTED and NATEC, Program 844 also have distinct funding targets, none of which are startups or SMEs. The identification of a focal organisation to oversee the activity will require an internal advocacy effort for a new National Programme, with a new organisation in command. If not, the organisations mentioned above will undergo several cycles of amendment to accommodate new functions, which may require years to finalise.Consequently, the transfer of IVs imposes additional responsibilities on the administrative structure of NIS which explains the Vietnam government's concern towards it.

5.3. Main actors in policy transfer process

5.3.1 Influencing organization

Despite reputation and potential from OECD as transfer agency, the failed engagement of OECD in non-western context and lack of plan shall be hindering factor. So far, OECD is the most vocal on IV with a good reputation both as policy transfer in general and pilot support in

Montenegro specifically. However, its practices in developing countries, for example, through the short-fall of "Enhanced Engagement" initiative, showed a controversial result as recipient government maintains its full control (Clifton and Díaz-Fuentes 2014) . As discussed above, Vietnam has stated its refrain from transferred ideology from foreign aids. This case is contrasting to Montenegro, as the country explicit expressed the interest to align its policy to EU framework, as a way to speed up its accession process in EU. Recent studies in the ex-Soviet region also found tendency of authoritarian nations to adopt a comprehensive set policies by foreign actors through non-coercive approach (Ulybina 2022). Therefore, only if the Vietnam government initiates the interest to participate in this process, OECD can follow the realm.

Noted that in May 2024, OECD and Vietnam signed an MOU to step up support for the implementation of the 15 projects within the Vietnam-OECD action plan for 2022 – 2026 (VNA 2024b). While the current plan mainly focus on Investment and Trade through 'Viet Nam and the OECD Declaration on International Investment and Multinational Enterprises', future engagement in startups/ SMEs and S&T field can be expected.

5.3.2 Recipient government

In Vietnam, the policy - making process can be divided into 2 categories: Making Law and Making Regulations/ National Plans/ Strategies (Law on Promulgation of Legal Documents 2015). IV fall into the second category since it can be a National Program with new authority-in-change or integrate in the function of already existed one. The process start by with drafting agencies at ministrial level submitting policy proposal to Government (or Prime Miniser) and wait for approval. The Prime Minister then issues guidelines to implement. Thus, it is anticipated that the policy transfer will take place through the following stages: information collection (study tour, active search, or suggestion from OECD), feedback to the influencing organisation, evaluation and internal advocacy (to determine the objects and degree of the transfer), awareness by ministerial leaders and government, and the decision to adopt (Duong 2023).

According to this procedure, the interest from MOST and MPI is essential, as they play the primary role in propagating the IV conceot. Both of these ministers are motivated by internal political conflict in the realm of innovation and startups policy. According to Mr. Nguyen Duc Hoang, Deputy Director of the Department of Technology Development and Innovation at MOST: There is an overlap between the notions of "innovation" and "innovative start-up," which leads to

a grey area in management (VNExpress 2024). While MOST continues to claim its position as the central hub for innovation activity, MPI is ramping up its role in supporting innovative startups and SMEs as tasked in the Prime Minister's Speech in National Conference Summarizing MPI's work in 2023 and implementing work tasks in 2024 (VOV 2024, 2). Though the discussion between MPI and MOST highlighted both ministries's interest and openness towards implementing new policy measures to boost innovation funding(Vietnam Investment Review 2021), the internal competition over which ministry should oversee these activities and entities may impede the policy transfer process, similar to the World Bank Project discussed in Chapter 4. The core of IVs is in the cooperation between PROs and Startups/SMEs, both of which operate within the jurisdiction of the two ministries. In order for the policy transfer process to begin, it is crucial to identify the appropriate government focal arms.

5.4 Conclusion

Overall, the use of the policy transfer framework to predict IV's transfer in Vietnam has revealed a complex interplay of multiple factors.

The policy transfer process is heavily influenced by institutional, economic conditions and socio-cultural practices. Vietnam's one-party state system, historical background, and Confucian values present both opportunities and challenges for the implementation of innovation vouchers. Although the system guarantees political stability and a willingness to adopt policies from western countries, concerns may arise due to ideological autonomy. Confucian principles foster an inclusive atmosphere for implementing R&D investment policies, whereas conservatism may delay the timely allocation of funds. Second, Economic conditions, particularly the financial capacity of the country, also pose a significant challenge. Despite strong GDP growth and a rich startup base, the current downtrend in budgeting for S&T creates pressure for the approval of another financial mechanism like IV.

The characteristics of the innovation voucher policy itself, including its simplicity, flexibility, and excellent reputation in Europe and neighboring country - China, make it a suitable solution to fill the current gap in NIS. However, the legal and administrative structure to support the transfer of such a policy can be troublesome due to the complex stakeholder involved, difficulties in evaluating the R&D services provided by PRO, IP complexity and lengthy processes to establish a focal point through a new national program or to add function to current agencies.

The policy transfer process also heavily depends on the interest and competition between MOST and MPI. Their mutual enthusiasm for implementing new policy measures to facilitate innovation finance is promising, but internal competition may impede the process of transferring these policies.

In light of these findings, it is clear that the transfer of innovation vouchers to Vietnam will not be a straightforward process. It requires thorough examination of multiple contextual circumstances, attributes of policies, and the involvement of diverse actors in the process of policy transmission.

CHAPTER 6: FINAL CONCLUSION

The thesis utilized Duong's (2022) theoretical framework to explore Vietnam's reluctance to adopt IV in the NIS. Stepping ahead of Evans (2009) findings about the limited descriptive function of policy transfer on its own, this thesis aims to improve the original policy transfer framework's capacity in explaining and forecasting outcomes by combinng it with other theories, such as the NIS system or historical institutionalism.

The thesis provides a detailed analysis of IV, a form of financial support that has been widely adopted to foster collaboration between firms and research institutes globally. It offers a comprehensive overview of IV, highlighting its proven benefits over the past two decades in different countries. The thesis also examines the specific characteristics necessary for the successful transfer of IV, using the case of Montenegro as an example. Utilising the framework, both transfer periods show: (1) The significant impact of the political climate and the influence of actors. This is driven by the country's aim to integrate its NIS with the EU-wide reference point. The process is facilitated by knowledge-based authorities and the macroeconomic condition. IV, as a financial tool, has significant design flexibility to cater to specific requirements. Its connection to the macroeconomic condition emphasises the transfer of autonomy and the tendency to replicate practices from neighbouring nations. (2) The policy must be evaluated in a broader context, taking into account factors such as reputation and simplicity, as well as NIS. All three hypotheses on the facilitating elements for this transfer, as identified in the literature review, were confirmed. Bottom-up wise, it is essential to have a solid market for IV that attracts significant interest from startups, SMEs, and PROs. From top-down, a government-designed market-oriented NIS, a dedicated body to coordinate activities and other complementary programmes that facilitate long-term collaboration between universities and businesses are all important.

Second, the examination of Vietnam's NIS and the utilisation of insights gained from policy transfer in Montenegro reveal that the procedure for implementing IV adoption may not be a simple and direct process, contrary to the policy itself or past transfer practices. Regarding *contextual factors*, including as the one-state system, historical the background, Confucian value, and economic standing, exert both push and pull influences on the process. The willingness to embrace Western policies and create a favourable atmosphere for the S&T confronts reservations from the desire for ideological autonomy and conservative approaches to public expenditure. The flourishing economy and resolute commitment from the federal to provincial level towards the

nation's economic growth through innovation, in contrast to minimal investment in S&T over a period of two decades, posed another challenge to overcome. Regarding the *policy itself*, both chapter 4 and 5 come to the same conclusion that IV is an appropriate solution to address the issue faced by Vietnam NIS. This is due to the presence of a well-established market of startups, SMEs, and PROs that have a strong interest for additional financial support. Also, the development of a market-oriented NIS over a period of two decades, along with various complementary programsuch as high-tech parks, NIC, Program 844, and TECHFEST, is well-established to support the long-term collaboration between universities and businesses. The reputation and diversity of successful practices from European countries and China provide a favourable condition to assess the transfer, since authoritarian states are eager to learn from both democratic and authoritarian counterparts (Lang 2018). The absence of a central coordinating entity is the main obstacle, as none of the organisations affiliated with MOST and MPI possess the function to assume leadership. Consequently, there is a need to establish a new National Program with a dedicated office to coordinate IV. Regarding *the actors involved*, the thesis identifies the OECD as a potential influential actor due to its recent efforts to increase its policy impact in Asia. Nevertheless, the challenges posed by the recipient government, Vietnam, and its intricate actors and internal competition within the public sector in this multifaceted field may hinder any influencing organization's ability to establish viable strategies for advocating policy acceptance.

Empirically, the thesis makes a valuable contribution to the current body of literature on Policy Transfer. It builds upon previous groundbreaking research on policy transfer in authoritarian nations by (Duong 2023). Extending upon the Dolowitz and Marsh 'sframework, the thesis tests a comprehensive methodology that considers several levels and various factors that influence the process of policy transfer. As the instrument has not been used in Vietnam, the policy transfer framework can serve as a guide to comprehend the reluctance of policymakers and identify the elements contributing to this situation. The thesis specifically calls for the integration of policy transfer and policy theory in a specific field, such as the NIS literature to design tech-related policies. Integrating analysis with focused policy study in the field can reveal additional underlying determinants and enhance the explanatory and predictive capabilities of the policy transfer framework. Future studies in different policy domains can further investigate new factors that impact the process of policy transfer.

The thesis provides practical proposals for the Vietnamese government to address the roadblock between SMEs, startups, and PROs in the NIS. First, implementing a simple financial tool like iV will be beneficial to the NIS, given its strong foundation for its implementation's success and help accomplish the objective of boosting public expenditure on S&T by 2% by the year 2030. Second, the government must choose an organisation responsible for allocating funds to startups/SMEs, and PROs. Not only for the purpose of IV's implementation but the clear function of a agency, running a National Program including IV, for example, will help accelerate the growth of NIS in dealing with research value's assessment and IP's complexity Vietnam.

ANNEX 1: BIBLIOGRAPHIES

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ANNEX 2: INNOVATION VOUCHER'S DESIGN PRACTICES

According to Ahonen (1994), Harisalo (1993), and Levin (1997), the components any voucher can be through 3 domains: finance, regulation, and information.

Regarding finance dimension, with a maximum funding allocation of 10,000 euros per individual initiative and an annual aggregate sum of less than 5 million euros, the majority of programs are designed to be cost-effective. However, the volume of the voucher can differ significantly, ranging from 2,500 euros in Portugal to 500,000 euros in Wallonia. The overall budgets also vary greatly, as both Korea and Colombia have carried out considerable national programs, varying from one hundred to five hundred million euros.

The regulatory dimension relates to the entities responsible for providing services. The sectors in which IV are utilized are broad in scope, although mostly focus on rising sectors and technology. The case of the United Kingdom's initiative in security, space, open data, water, and trash, as well as the partnership between France, Austria, and Finland in a voucher program for innovators in renewable energy services, are some of the examples. Accordingly, there is a wide range of types for service suppliers. The survey conducted among 47 OECD Programs revealed that these institutions consist of various entities, such as commercial enterprises, universities, state research bodies, etc. (Ivashchenko, Kornyliuk, and Polishchuk 2021) The assessment of service delivery, regardless of its level of satisfaction, is a gap in existing scholarly works.

The information dimension refers to eligibility requirements for voucher distribution. While there is indeed a diverse array of recipients, the majority of IV programs are designed for general firms or small and medium-sized enterprises. Moreover, they have the ability to target specific marginalized groups. Effort to include specific groups of women or low-income groups in Korea or Malta are examples. On the other hand, Sala, Landoni, and Verganti (2016)identified weaknesses in IV, noting that they performed better on businesses that had already invested time and money in innovation activities. This indicated that, in the long run, the government should increase its efforts to engage with small and medium-sized enterprises that are less knowledgeable about innovation, for example by utilizing trade associations or chambers of commerce to reach the target audience. Additional research is required to examine the procedure and eligibility requirements for voucher receipt in order to identify the factors that influence the selection of eligible firms.