

# The Influence of Top-Down Mode and Bottom-up Mode to National Innovation and Entrepreneurship

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**Abstract:** Innovation and entrepreneurship are critical drivers of economic growth and national development. The top-down mode of management and organization involves a hierarchical approach, where decisions and directives are made by top-level authorities and cascaded down to lower levels. This approach emphasizes centralized control, formal processes, and standardized procedures. On the other hand, the bottom-up mode of management and organization emphasizes autonomy, empowerment, and participation of individuals and teams at all levels of the organization. This approach encourages creativity, experimentation, and innovation from the grassroots level. We analyze the impact of these two modes on national innovation and entrepreneurship by examining their implications for organizational culture, leadership styles, decision-making processes, and resource allocation. We also review empirical evidence from various countries and industries to understand the contextual factors that influence the effectiveness of these modes in fostering innovation and entrepreneurship. Our findings suggest that both top-down and bottom-up modes have their strengths and limitations in driving innovation and entrepreneurship at the national level. While top-down approaches may be effective in promoting large-scale projects and initiatives, bottom-up approaches can foster a culture of innovation and entrepreneurship across diverse sectors and industries. We propose that a balanced approach, which combines elements of both modes, may be the most effective in promoting national innovation and entrepreneurship. We conclude by discussing policy implications and future research directions in this area.

**Keywords:** Entrepreneurship; National Economic Promotion; Innovation Policy; Institutions; National Development.

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## 1. Introduction

The Innovation, derived from the Latin word "innovāre" meaning to reform or change, has long been recognized as a crucial tool for entrepreneurs to discover new potential for their businesses or services (Peter Drucker, 2014). It is considered a key driver of economic activity, and its role in the success or failure of companies and countries has gained increasing recognition in recent years (Fromhold - Eisebith et al., 2005). However, the question of who should guide innovation, firms at the individual level or countries from a macroscopic view, has sparked debates about the appropriate position of innovation in the overall development of a nation.

To address this question, systematic and scientific theories have emerged from the field of organization and management, proposing two distinct modes of management and organization that shape the motivation for innovation in different ways: The Top-Down mode and the Bottom-Up mode. These two modes offer different perspectives on how innovation should be driven, and their implications for national innovation and entrepreneurship are a subject of ongoing discourse.

This review paper aims to examine the influence of the Top-Down mode and the Bottom-Up mode on national innovation and entrepreneurship. Firstly, we will discuss the impact of these two modes on a country's innovation landscape, exploring their strengths and limitations from a theoretical and influential perspective. We will delve into the implications of these modes on organizational culture, leadership styles, decision-making processes, and resource allocation, and draw insights from empirical evidence across various countries and industries. Secondly, we will investigate how these two modes influence the entrepreneurship ecosystem at the national level, including

their effects on start-up activity, business development, and economic growth. We will analyze the role of these modes in fostering a culture of entrepreneurship and supporting entrepreneurial initiatives in a country.

Through this review, we aim to highlight the differences between the Top-Down and Bottom-Up modes and their potential implications for national innovation and entrepreneurship. We argue that there is no one-size-fits-all approach to innovation and entrepreneurship promotion, and that industry-specific strategies should be considered. We conclude by discussing the policy implications of these findings and identifying future research directions in this area.

## 2. Top-Down and Bottom-Up Policy Modes

### 2.1. Top-Down Policy-Making Mode: Shaping National Innovation and Entrepreneurship through Elite Groups

In recent years, the concept of innovation has gained increasing attention as a critical driver of economic growth and development in many countries. The literature on innovation and entrepreneurship has explored different modes of policy-making and management that can influence innovation at the national level. One of the most discussed modes is the top-down policy-making mode, which refers to the process by which the elite groups of countries transform their values and interests into public policies.

The top-down policy-making mode involves several independent paths through which policies are connected from the top to the bottom. These processes have their independence, and each process contains some professional functional differences of major organizations (Figure 1).

However, all processes tend to be intertwined vertically and horizontally, allowing for synchronous communication of policy choices among the elite group. This mode is characterized by a centralized approach, where policy decisions are made by the elite groups at the top of the hierarchy and implemented downwards.

For example, in countries with a strong government-led approach to innovation policy, such as China, the top-down policy-making mode has been used to drive innovation and entrepreneurship. The Chinese government has set ambitious national goals for innovation and has implemented policies and strategies to achieve these goals. The government has established specialized agencies, such as the Ministry of Science and Technology and the National Development and Reform Commission, to coordinate and implement innovation policies across different sectors and regions. These policies include funding for research and development, tax incentives for innovation, and support for technology transfer and commercialization. The top-down policy-making mode in China has been instrumental in promoting innovation and entrepreneurship in key industries, such as advanced manufacturing and high-tech sectors.



Figure 1. Top-down policy mode

## 2.2. Bottom-Up Policy-Making Process: Promoting Innovation and Entrepreneurship through Public Participation

In contrast to the top-down policy-making mode, the bottom-up policy-making process is promoted by the public, and interest representative groups act as an important intermediary between individuals and their governments. The bottom-up model is characterized by a more decentralized and participatory approach to policy-making, where individuals and organizations at the grassroots level have a direct influence on policy decisions.

Interest representative groups, such as industry associations, labor unions, and advocacy organizations, play a crucial role in the bottom-up policy-making process. These groups represent the interests of individuals and communities in lobbying, attending congressional hearings, contacting government officials, and overseeing legislative procedures and executive enforcement. They provide a platform for public participation in policy-making, allowing diverse voices to be heard and considered in the policy formulation process.

For example, in countries with a strong tradition of civil society participation, such as Sweden, the bottom-up policy-making process has been used to promote innovation and entrepreneurship. The Swedish government has a long-standing tradition of engaging with civil society organizations in policy-making, including those focused on innovation and entrepreneurship. These organizations provide input and feedback on policies related to innovation, entrepreneurship, and economic development. This bottom-up approach allows for a more inclusive and participatory policy-making process, where diverse perspectives and ideas can be considered.

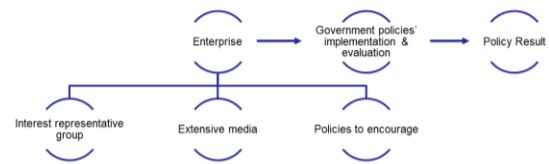


Figure 2. Down-top policy mode

While the top-down and bottom-up policy-making modes differ in their approach, they can both play a role in shaping national innovation and entrepreneurship. The top-down mode involves elite groups of countries transforming their values and interests into public policies, while the bottom-up mode promotes public participation through interest representative groups. It is important to note that there is no universal blueprint for promoting innovation and entrepreneurship, and an industry-specific approach should be adopted to effectively promote innovation and entrepreneurship. Both top-down and bottom-up approaches have their strengths and limitations, and the choice of policy mode should be based on the specific context and goals of a country or region. In the following sections, we will further explore the influence of these two modes on national innovation and entrepreneurship, drawing

## 3. The Influence of Two Modes to the Country's Innovation after COVID-19

The influence of the top-down and bottom-up modes on a country's innovation and entrepreneurship can be observed in various contexts, including the post-pandemic period after COVID-19. The top-down mode, characterized by policies formulated and implemented by elite groups, can provide policy direction and involve a more centralized and hierarchical approach. For example, during the COVID-19 pandemic, many countries implemented top-down policies such as lockdowns, travel restrictions, and economic stimulus packages to address the crisis and support innovation and entrepreneurship in specific sectors.

On the other hand, the bottom-up mode, which involves a more participatory and decentralized approach, can be effective in fostering entrepreneurship and innovation, particularly when there is a considerable number of firms already in the industry. For instance, during the post-pandemic recovery phase, bottom-up initiatives such as grassroots innovation, community-driven entrepreneurship, and local innovation clusters have emerged as effective ways to stimulate economic growth and innovation at the regional level. One example of the top-down mode's influence on innovation and entrepreneurship is the role of government in providing public goods. Governments can invest in infrastructure, education, and research and development, which may not be effectively addressed by private firms in the bottom-up mode. These top-down investments can create an enabling environment for innovation and entrepreneurship, by providing the necessary physical and human capital, and fostering a culture of innovation.

On the other hand, the bottom-up mode can foster innovation and entrepreneurship through trial and error. Entrepreneurial teams and new enterprises can experiment with new technologies, models, and business approaches, seeking to create new demand realization models. This bottom-up approach allows for a more market-driven

approach to innovation and entrepreneurship, as it is based on information symmetry, organizational effectiveness, and governance system and capacity. In the context of China's economic transformation, entrepreneurship and innovation are seen as fundamental to driving economic growth. China has adopted a bottom-up approach to entrepreneurship and innovation, with an emphasis on research and development, design, and creation of new technologies, models, and enterprises. This approach is seen as the micro-foundation of a market economy, and it is driving the development of a socialist market economic system "from the bottom up".

The influence of the top-down and bottom-up modes on a country's innovation and entrepreneurship is highly industry-specific, and both modes have their advantages. The top-down mode can provide policy direction and public goods, while the bottom-up mode can foster entrepreneurship and innovation through trial and error and market-driven approaches. It is important to adopt an industry-specific approach when promoting innovation and entrepreneurship, taking into consideration the strengths and weaknesses of both top-down and bottom-up modes, and leveraging them accordingly to create a conducive environment for innovation and entrepreneurship to thrive.

#### **4. Risk and Opportunity Analysis of Top-Down and Bottom-Up Entrepreneurial Modes in the Post-Pandemic Period**

The COVID-19 pandemic has had a profound impact on global economies, leading to significant changes in the entrepreneurial landscape. As countries navigate the post-pandemic period, two distinct modes, namely top-down and bottom-up approaches, have continued to shape entrepreneurship in various countries. In this discussion, we will explore the risk and opportunity analysis of these two modes using certain marketing models.

##### **4.1. Top-Down Approach**

**Stabilizing Businesses and Jobs** One example of a top-down approach in the post-pandemic period is the implementation of the Paycheck Protection Program (PPP) in the United States. The PPP aimed to provide financial support to small businesses affected by the pandemic, with the goal of stabilizing the economy by ensuring that businesses remained open and employees retained their jobs. This approach involved government intervention and policy measures to support entrepreneurship and mitigate the impact of the pandemic on businesses.

###### **1)Risk Analysis:**

**Risk of over-reliance on government support:** Businesses that relied solely on PPP funds may face risks if the program ends or is not extended. This could result in a sudden loss of financial support and potential business closures.

**Risk of lack of flexibility:** PPP funds may come with strict guidelines and restrictions on how the funds can be used, limiting the flexibility and adaptability of businesses to changing market conditions.

**Risk of unequal distribution:** There may be challenges in ensuring that PPP funds reach all businesses, particularly small and minority-owned businesses, equally, resulting in disparities in support and opportunities.

###### **2)Opportunity Analysis:**

**Opportunity for business continuity:** The PPP provided

businesses with the opportunity to remain operational and retain their employees during the pandemic, helping them to weather the crisis and potentially continue their operations in the post-pandemic period.

**Opportunity for market stability:** The top-down approach of the PPP aimed to stabilize the economy by keeping businesses open, which could contribute to maintaining market stability and preventing further economic downturn.

**Opportunity for government-business collaboration:** The PPP highlighted the potential for collaboration between the government and businesses in times of crisis, which could foster trust and cooperation between different stakeholders in the entrepreneurial ecosystem.

##### **4.2. Bottom-Up Approach**

**Entrepreneurship and Innovation in the Gig Economy** The pandemic also led to an increase in remote work and the rise of the gig economy, where individuals work as independent contractors instead of being employed by a company. This bottom-up approach allows individuals to have more control over their work and schedule, leading to increased entrepreneurship and innovation in the gig economy.

###### **1)Risk Analysis:**

**Risk of uncertain income stability:** Gig economy workers may face risks related to irregular and uncertain income streams, as their earnings depend on the demand for their services and may fluctuate.

**Risk of lack of social protections:** Gig economy workers may not have access to traditional employee benefits such as health insurance, retirement plans, and paid leave, which could pose risks to their financial security and well-being.

**Risk of market saturation:** The gig economy may become saturated with increased competition, leading to challenges in standing out and finding profitable opportunities.

###### **2)Opportunity Analysis:**

**Opportunity for flexible work arrangements:** The gig economy provides individuals with the opportunity to have more control over their work schedule and flexibility, allowing them to pursue entrepreneurial opportunities and adapt to changing market conditions.

**Opportunity for innovation:** The bottom-up approach of the gig economy encourages entrepreneurship and innovation, as individuals are free to pursue their unique ideas and solutions in response to emerging demands and challenges.

**Opportunity for diverse income streams:** Gig economy workers may have the opportunity to diversify their income streams by offering different services or working for multiple platforms, potentially increasing their earning potential and financial resilience.

The top-down and bottom-up entrepreneurial modes have continued to shape the entrepreneurial landscape in the post-pandemic period, with each approach having its strengths and weaknesses. The top-down approach, exemplified by government interventions such as the PPP in the United States, aims to stabilize businesses and jobs, providing opportunities for business continuity and market stability. However, it also carries risks such as over-reliance on government support and lack of flexibility. On the other hand, the bottom-up approach, seen in the rise of the gig economy and remote work, encourages entrepreneurship and innovation, providing opportunities for flexible work arrangements and diverse income streams. However, it also comes with risks such as uncertain income stability and lack of social protections.

Furthermore, our discussion highlights that the

effectiveness of these modes may depend on industry-specific factors, such as the number of existing firms. The bottom-up mode may show its cluster effect only when there are enough players in the industry, while the top-down mode may contribute to the enrichment of the economic structure through its signal effect. Therefore, there is no universal solution for promoting innovation activity, and policymakers and entrepreneurs should consider industry-specific factors when formulating policies.

## 5. Conclusion

In conclusion, a balanced approach that considers both top-down and bottom-up modes may be necessary to foster entrepreneurship and innovation in the post-pandemic period. This may involve government interventions to stabilize businesses and jobs while also providing flexibility and support for bottom-up entrepreneurial initiatives. By understanding the risks and opportunities associated with these modes and considering industry-specific factors, policymakers can create an enabling environment for entrepreneurial activity and promote innovation in a post-pandemic world.

## Competing Interests

All authors declare no Competing Financial or Non-Financial Interests.

## Data Availability

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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