The consumer price index and its effect in the new ecosystems and energy consumption during the sanitary confinement: the case of an emerging country

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Abstract. The country's economies are undergoing major structural changes as a result of the Covid-19 pandemic. It is mainly due to various businesses managing to limit the distribution of the plague at the levels of industry exchanges and particularly among small-business tradesmen, craft manufacturers, and other sectors of activity. Since the time many countries around the world have lifted their isolation policies, or are about to do so, we wanted to have an up-to-date overview of the current epidemic situation in Morocco in relation to other countries. In addition, we discovered that Morocco's current epidemic situation has a significant impact on the global level of consumption. The purpose of this piece of writing is to try to find out the effect of government policies on the consumer price index in order to handle the upcoming change in the energy and ecosystem ecosystems.

1. Introduction
The Covid-19 epidemic left China in late 2019, logically, the country's economy was first affected. With the spread of the virus, the global economy has stalled and there is no doubt that the unemployment rate in the past three months has been very bad. Other economic statistics in Morocco and in other parts of the world that the economic crisis is particularly serious. On the other hand, the psychosocial fear of consumers has created a huge imbalance in the market, through the strong demand for food products is the total decline in demand for non-food products [1]. To face exceptional healthcare costs and support the sectors affected by the coronavirus crisis, His Majesty King Mohammed VI ordered the immediate creation of a special fund dedicated to the management of the coronavirus pandemic, the fund a double objective: to modernize the medical device by investing in equipment, and to mitigate the shock caused by the pandemic on the national economy, with financial aid intended for the priority sectors. In this case, numerous measures have been announced to absorb psychosocial fear, for example by deferring the expiration of the credit, by suspending the payment of social charges and public guarantees, by compensating the employees affiliated to the CNSS and by supporting the company. Reports for additional cash lines, such as DamaneOxygene. Vulnerable families were not left out, and a series of measures were taken, such as compensating beneficiaries of Ramed (more than 3 million families) between 800 Dh 1000 Dhou 1200 DH depending on the number of members of the family. The measures taken within the framework of the Monitoring Committee aim to maintain the work of vulnerable sectors, ie almost 800,000 jobs. However, despite all efforts, the overall level of consumption has experienced several fluctuations, which we are talking about in this article.

Given that the period of containment due to the Covid 19 virus (Crona), several countries have decided to stop all activities including economic activities, industry and commerce, this will have a direct impact on monetary circulation and especially the wealth creation [2]. Faced with this situation, many heads of families have been found in critical situations, especially for trades that are
not well organized (crafts, hairdressers and similar trades) [3,4]. At this level, many families have used their savings during the first and second month of confinement, other families have used loans, but despite this, confinement has affected the level of consumption of families in Morocco, in this regard, the most important aspects in consumption have achieved negative results, fortunately that the month of Ramadan to save the situation of the traders and level of consumption even this to them very negative repercussions on the income levels of families. From there, we distinguish between the consumption of food products and the consumption of non-food products.

2. Methods

The Consumer Price Index (CPI) provides a tool for measuring inflation. It allows us to measure the overall evolution of the prices of the goods and services we consume [5]. We talk about inflation when prices go up (when the index is above 100) and deflation when prices go down (when the index is below 100). It also makes it possible to estimate the average variation in the prices of products consumed by households between two given periods [6]. It is a complete measure of the evolution of product prices under constant quality. The prices of these goods are regularly observed at different periods. The HCP calculates the price evolution between the two periods for each series of goods. Calculate the weighted average of the weight of each product to obtain the average change in basket prices. The index provides a description of this development. Therefore, what is important is not the absolute value of the index, but the value compared to the previous observation or to the reference value. In Morocco, the Office of the High Commission for Planning (HCP) publishes it once a month.

3. Results and Discussion

The consumer price index experienced during the month of March 2020, an increase of 0.4% compared to the month of February. Compared to the same month of January, the consumer price index recorded a 1.1% increase in February 2020 as a result of the 1.2% increase in the food products index and the 1.1% increase in the non-food products index. This same index recorded in April 2020 a decrease of 0.1% compared to the previous month and an increase of 0.9% over a year according to the last report of the High Commission for Plan. This change is the result of the 0.7% decrease in the non-food index and the 0.7% increase in the food index.

| Table 1. Monthly evolution of the consumer price index |
|------------------------------------------------------|
| CONSUMER PRICE INDEX (CPI)                          |
| Food products | Non-food products | Global Index |
|----------------|-------------------|--------------|
| January        | -0.4              | 0.2          | -0.1         |
| February       | -0.3              | -0.2         | -0.2         |
| March          | 1.3               | -0.2         | 0.4          |
| April          | 0.7               | -0.7         | -0.1         |

Due to the sanitary containment that came into effect on March 20, 2020, the permanent investigation by the High Commission for the Plan on consumer prices could not raise all prices. The missing prices were imputed according to the recommendations of the consumer price index manual, mainly due to the cessation of several economic and business activities that directly impacted the
price index [7]. As a result, the 2.7% increase in the food products index and the 0.3% decrease in the non-food products index. For non-food products, the variations range from a decrease of 6.3% in Transport (stop of several public means of transport) to an increase of 3.2% in Education following the requirements of confinement (Education in distance).

Fig 1. Consumer price index (CPI) for the first four months of 2020

According to the information note from the High Commission for Plan, the increases in food products observed between March and April 2020 mainly concern "Fish and seafood" with 10.2%, "Fruits" with 5.8%, “Milk, cheese and eggs” with 0.3% and “Oils and fats” with 0.1%. In contrast, prices fell 1.3% for "Meat" and 1.2% for “Vegetables”. For non-food products, the variation mainly concerned the fall in the prices of "fuels" with 16.2%.

Fig 2. Evolution by product division - Food products.
According to data from the High Commission for Planning, the price of "metallurgy" fell by 0.7%, the "clothing industry" by 0.5% and both by 0.3%. By way of comparison, it finally represents 0.4% of "wood transformation and manufacture of articles in wood and cork". The result is that compared to March 2020, producers in the "manufacturing industry without refining petroleum" in April 2020 the price index fell 0.1%.

The current coronavirus situation has had a profound impact on all areas of activity, but according to this study, we previously found that the food industry is less affected by sanitation restrictions, alongside the price index consumption recorded by non-food industries. Great decline. With the temporary closure of some companies and the slowdown in the activities of many companies, the consequences of this epidemic have worsened for the Moroccan economy [8]. The impact of the COVID-19 outbreak on all economic sectors and the containment measures instituted have thrown a wrench into previous efforts to increase energy efficiency. On the other hand, containment increases total household energy consumption. The economic slowdown in Morocco is linked to the population decline in that country, and as a result the price of electricity markets has also fallen, as well as the price of CO2 quotas. Despite this, the results vary between countries such as Morocco leading to a reduction in kingdom-wide electricity consumption [9].

Additionally, the rise of new entrepreneurial firms has helped boost the nation's economy and add to the country's job market, but these developments are additionally valuable for addressing the long-term sustainability and social inclusiveness problems that are on the rise today. Project leaders benefit from the entrepreneurial ecosystem's commitment to new ideas [10]. A major development occurred in 2020 when the government began implementing a "Integrated Business Support and Financing Program" [11]. In Rabat on January 27, the program was presented to the Sovereign for its activation. Its three main axes revolve around financing small businesses, coordinating various support initiatives for small business owners in local areas, and providing financial access to rural populations. In order to encourage and promote this entrepreneurial dynamic, a group of individuals working together in support of innovative entrepreneurship in Morocco have established the Moroccan Startup Association to help the country build an efficient innovation ecosystem. (sustainable growth and self-sufficiency) (MSEC). This association, which was established a year ago, seeks to assist startups in raising common challenges while defending their interests. By promoting
professional and ethical standards within the ecosystem, it helps ensure an ethical and well-behaved ecosystem [12,13].

According to MSEC founding member and Startup Factory founder, momentum established over the past few years, with the launch of various initiatives like the Innov Invest Fund, Open Innovation, and the Startup Hub, has allowed entrepreneurial ecosystems to develop across all value chains, from idea to project [14]. Although the entrepreneur acknowledges that he is just beginning to make a name for himself on the global stage, he points out that he has quite a bit of ground to cover. To begin with, the challenge is to strengthen the synergies among all players in the ecosystem. This particularly involves the formation of a mechanism that will bring together the various stakeholders in order for them to work cooperatively with rules and an ethical charter so that the sector can be professionalized. For example, one should ensure that support actors and their trainers are certified and audited in order to provide actual support to project leaders. Entrepreneurship is tough, and the responsibility for helping them is enormous, says Mehdi Alaoui. In order to obtain true professionalization of the support processes, we must look ahead to a bigger picture. With the goal of addressing this challenge, the Startup Factory began a database project, which among other things allowed them to identify 1,000 Moroccan startups in various sectors and with various stages of maturity (from creation to an operational prototype in the most advanced stages of development). The goal is to make it easy for those various actors who are interested in working with these startups to find them.

4. Conclusion
As an economy focused on consumption, trade and tourism, the national economy so far suffered significant losses in 2020 due to the consumer's psychosocial fear following the health pandemic. Global uncertainty in the labor market has resulted in loss of work and income without knowing when it can be restored. Although this study allowed us to diagnose the direct impact of the drop in income, it ultimately led to a sharp drop in the consumption index for non-food products. To get out of this critical situation, families and households must have social confidence and spend a lot of money to revive general economic activity. In this sense, we recommend opening a serious debate and doing in-depth research in order to study the possibility of printing the maximum number of money banknotes by the monetary authorities concerned to face the scale of the economic crisis caused by the pandemic of the new coronavirus.

References
[1] Al-Awadhi A M Al-Saifi K Al-Awadhi A Alhamadi S 2020 J. Behav. Exp. Finance 27 100326
[2] Albulescu C 2020 Coronavirus and financial volatility: 40 days of fasting and fear. arXiv preprint arXiv:2003.04005.
[3] Mahdi A H 2020 International Journal of Psychosocial Rehabilitation, 24 (9) 98-118
[4] Bourekkadi S Imrani E L Kandili M E L Slimani K Khoulji S and Babounia A 2019 Education Excellence and Innovation Management through Vision 2020, Pages 6310-6317.
[5] El Imrani O 2021 Networks and Systems, 183 Springer, Cham.
[6] Bourekkadi S Slimani K El Imrani O Kerkeb M L Khoulji S Aboulhassane A 2021 E3S Web of Conferences 234 00108
[7] Ali M Alam N and Rizvi S A R 2020 Journal of Behavioral and Experimental Finance 27 100341.
[8] Kuqi B Elezaj E Millaku B Dreshaj A and Hung N T 2021 Journal of Sustainable Finance & Investment 1-12.
[9] Hung N T 2020 International Journal of Management 11 (11) 954-970.
[10] Fajrianto N Putra F N Majid R F A Yulianti I Kurniawan DT 2020 *International Journal of Psychosocial Rehabilitation* 24 4791-4798.

[11] Kassou M Bourekkadi S EL Imrani O U A I L Boulaksili A Aharouay S Ourdi A ... and Khoulji S 2021 *Journal of Theoretical and Applied Information Technology*, 99 (9).

[12] Bui T T H Jambulingam M Amin M and Hung N T 2021 *Journal of Sustainable Finance & Investment*, 1-19.

[13] Sohrabi C Alsafi Z O’neill N Khan M Kerwan A Al-Jabir A and Agha R 2020 *International journal of surgery* 76 71-76.

[14] Bourekkadi S Slimani K Imrani O E L Ezzaki M Babounia A and Fakhri Y 2020 *Journal of Theoretical and Applied Information Technology*, 19, 3222-3232.