
THE EFFICIENCY OF CAPITAL ACCOUNT LIBERALIZATION IN INCREASING THE LEVEL OF FOREIGN DIRECT INVESTMENT

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ABSTRACT

The mechanisms that link one economy to the others are diverse. This diversity comes from the fatality and the necessity for the economies to be interacted according to the trade and investment principles. In order to ensure the fairness and the smoothing of this interaction, the several economic activities inside and outside must be systematically recorded. In this context, the capital account holds flows that prevail between the country and the rest of the world, and it is responsible for revealing the economic position of the country vis-à-vis the others. The liberalization of this account creates distinguished dimensions of operation management both in terms of accounting and impact. This paper sheds light on the measures of the capital account liberalization and their effect on the foreign direct investment magnitude.

Keywords: capital account liberalization, foreign direct investment, operation management

1-Introduction:

Foreign direct investment has been considered as a good and persistent driver of the economic development. The contribution of FDI to strengthen the development platform comes from three characteristics enjoyed by this kind of investment: the stability over time, the tangibility state and the difficulty of irreversibility. Various studies illustrated that foreign direct investment is a strong promoter to growth, employment, and the technology adopted in the recipient country. For this reason, several strategies and various policies are taken in order to attract as much as possible this investment (economic policy- Jurisdictional policy- environmental policy-cultural policy). However, it is crucial for the countries attempting to host FDI to relax some important criteria having strong impact on directing the trends of FDI. This relaxing process is a major concern of all countries seeking FDI because it poses a variety of issues such as: the kind of relaxation, the variable to be managed and the convenient policy to follow. In this context, capital account liberalization is shown as a primal condition to be considered cautiously both in terms of the liberalization level and the suitable timing of this strategy.

2. Level of capital account liberalization and FDI:

The correlation between FDI and capital account is a contentious issue. This is due to the divisive nature of the issue under investigation. For instance, the foreign direct investment is one of the capital account components, and the management of this account in a way that increases the inflows of FDI means implicitly a manipulation of the treatment ways of the components. Indeed, the interrelation between the two above variables is a matter of controversy. The latter comes from the priori fulfillment of some conditions about the level of the economic and financial hosting country before tackling the subject of the correlation. In this sense, the neo-classical modeling considers that the capital account liberalization contributes actively to the increase of the foreign direct investment, but this is ensured especially in an environment where the information is perfectly transmitted, the contract are flexibly dealt and the markets are competitive. However, this is not actually the case, the fact that leads to the occurrence of various frictions in the impact of capital account of foreign direct investment. Additionally, the link between the two variables is also conducted by the level of the uncertainty that shapes the future decisions. This subject refers both to the appropriateness of the liberalization policies adopted and their positive impact on the attraction of the foreign investment wanted. To achieve the target by the predetermined levels, the following conditions are stated:

2.1. A suitable economic and financial environment that enhances the investment initiatives and accept the others (Socio-cultural versus economic condition)

2.2. A level of education and knowledge that fits with the technology and the management skills imported by foreign direct investment (knowledge condition)

2.3. Developed and expanded markets in order to absorb the know-how and the magnitude of the foreign investments

2.4. A flexible and suitable jurisdictional environment that paves the way to the suppleness and the transparency of dealing contracts.

Once these conditions are respected, the level of foreign direct investment will be a subject of the cost-benefit analysis. This subject implies that the force of attraction that the host country enjoys is specified

according to the rules of rationality and the expected benefits coming from FDI. These benefits grow exponentially when the environment of the host country is maintained in favor of the nexus FDI-growth. Consider the expanded Cob-Douglas Model:

$$FDI_t = \phi EF^\alpha \lambda KE^\beta \ell M^\theta \omega L^\vartheta \quad / \alpha + \beta + \theta + \vartheta = 1 \quad (1)$$

FDI_t is the flow of foreign direct investment to the host country, EF is the economic and financial environment of the host country, KE means knowledge and education of host country individuals, M is the market size, L is the jurisdiction situation of the host country. $\phi, \lambda, \ell, \omega$ are the respective scalars measuring the levels of compatibility between FDI and the above variables. $\alpha, \beta, \theta, \vartheta$ are measures of the impact efficiency exercised by each one of the respective variables on the FDI.

The country adopts a strategy of liberalizing the capital account under the four cited conditions in an attempt to optimize its efficiency to attract foreign direct investment. Hence, the prospects of capital account liberalization are to maximize both the flows of FDI and to take profit from its spillovers:

$$CAL_t = \max_{(EF, KE, M, L)} E \left[\int_t^\infty e^{-\rho t} u(FDI_{t+\varphi}, EC_{t+\gamma}) dt \right] / (\varphi, \gamma) \in [0, \infty], \quad \gamma < \varphi \quad (2)$$

EC is the environment conditions

$$(2) = \max_{(EF, KE, M, L)} E \left[\int_t^\infty e^{-\rho t} u(FDI_{t+\varphi}) dt \right] + \max_{(EF, KE, M, L)} \left[\int_t^\infty e^{-\rho t} u(EC_{t+\gamma}) dt \right] + \max_{(EF, KE, M, L)} \left[\int_{t+\varepsilon}^\infty e^{-\rho t} u(CAL_{t+\varepsilon}) dt \right] \quad (3)$$

Thus, the responsibility of the capital account liberalization is twofold: to increase the level of the foreign direct investment attracted and to improve the efficiency of this account itself as a factor of attraction. The country wishes to attain the following points:

$$\frac{\partial CAL_t}{\partial FDI_{t+\varphi}} = \frac{\partial CAL_t}{\partial EC_{t+\gamma}} = \frac{\partial CAL_t}{\partial CAL_{t+\varepsilon}} = 0 \quad / \gamma < \varepsilon \quad (4)$$

$$(4) \Rightarrow \frac{\partial \left[\max_{(EF, KE, M, L)} E \left[\int_t^\infty e^{-\rho t} u(FDI_{t+\varphi}) dt \right] \right]}{\partial FDI_{t+\varphi}} + \frac{\partial \left[\max_{(EF, KE, M, L)} \left[\int_t^\infty e^{-\rho t} u(EC_{t+\gamma}) dt \right] \right]}{\partial EC_{t+\gamma}} + \frac{\partial \left[\max_{(EF, KE, M, L)} \left[\int_{t+\varepsilon}^\infty e^{-\rho t} u(CAL_{t+\varepsilon}) dt \right] \right]}{\partial CAL_{t+\varepsilon}} = 0 \quad (5)$$

Therefore, the strategy of the liberalization attempts to reach the objectives concomitantly: the highest possible level of FDI attracted the highest level of the business environmental conditions to attract FDI and the continual improvement of the capital account liberalization policy:

$$(5) \Rightarrow \begin{cases} \frac{\partial \left[\max_{(EF, KE, M, L)} E \left[\int_t^{\infty} e^{-\rho t} u(FDI_{t+\varphi}) dt \right] \right]}{\partial FDI_{t+\varphi}} = 0 \rightarrow A \\ \frac{\partial \left[\max_{(EF, KE, M, L)} \left[\int_t^{\infty} e^{-\rho t} u(EC_{t+\gamma}) dt \right] \right]}{\partial EC_{t+\gamma}} = 0 \rightarrow B \\ \frac{\partial \left[\max_{(EF, KE, M, L)} \left[\int_{t+\varepsilon}^{\infty} e^{-\rho t} u(CAL_{t+\varepsilon}) dt \right] \right]}{\partial CAL_{t+\varepsilon}} = 0 \rightarrow C \end{cases} \quad (6)$$

The following curves show the gradual development of the efficiency wanted from the liberalization strategy:

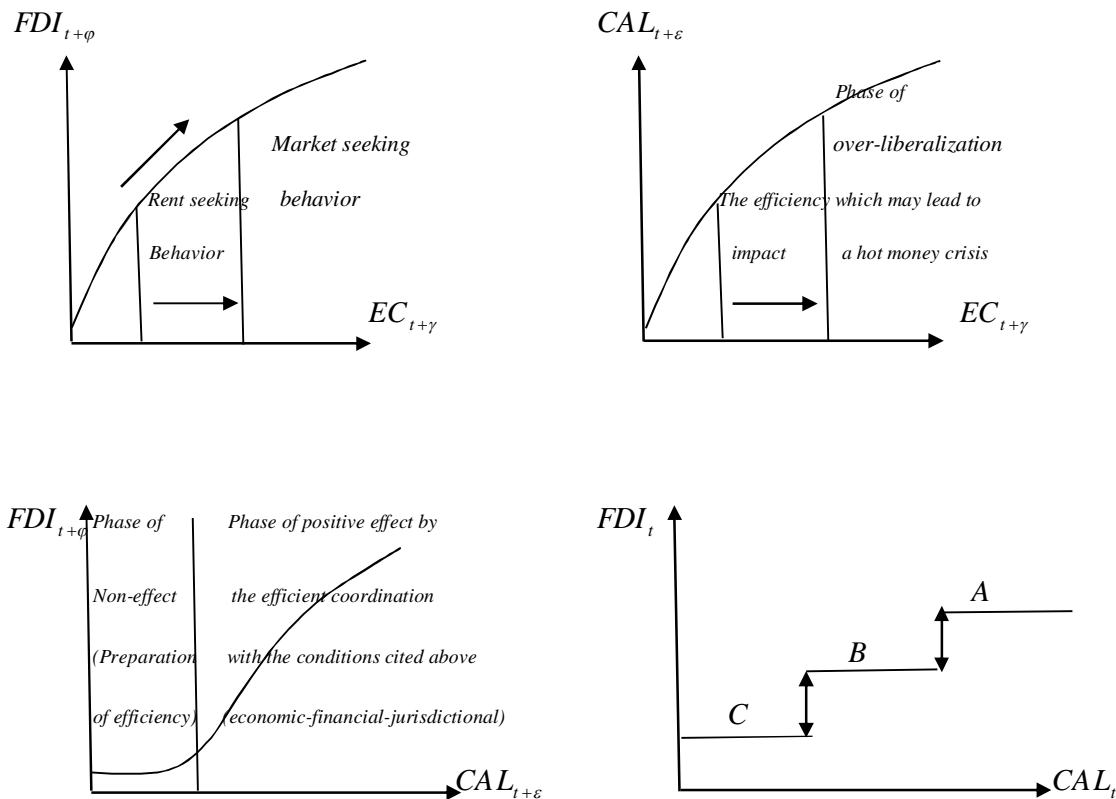


Figure.1. Levels of capital account liberalization and FDI

Source: the researchers

3. The timing strategy of capital account liberalization and FDI:

The timing strategy is another important issue impacting the capacity of the country to attract foreign investments. This capacity is conducted primarily by choosing the suitable time to liberalize as well as the method of the liberalization adopted. In this context, two methods of liberalization are conceived: the impulsive liberalization and the gradual one. The former implies lifting the barriers simultaneously as a way to permit the entering of all kinds of international investments (FDI, portfolio investment) while the second one is taken only after preparing the economic and the institutional background that preserves and maintain the good exploitation of the foreign investment benefit. The gradual timing strategy is a recursive strategy which takes its feedback from the previous phases. Each phase of liberalization holds the correct measures to the future stages in such a way to improve the efficiency of the liberalization according to the level and quality desired of FDI. Thus, it is a matter of liberalization plans should to be presented cautiously according to what have been stated as objectives. Consider the following dynamic model:

$$FDI_{\infty}(t) = \max_{t \in \mathbb{R}_0^+} \int_0^{\infty} e^{-\sigma t} g(CAL(t), EC(t)) dt \quad (7)$$

This dynamic model shows that the foreign direct investment is conducted over time by the dynamic states of both the capital account and the economic situations of the host country. As there is a time lag between the implementation of the liberalization and the responsive reaction of the foreign direct investment measures, the above model is transformed into a discrete time model with time slides denoted by $k / k \in \mathbb{N}_0$:

$$FDI_{\infty}(k) = \max_{t \in \mathbb{R}_0^+} \sum_{k=0}^{\infty} \beta^k g(CAL(k), EC(k)) / \quad (8)$$

$$k \in \left[\left(0, \frac{k_1}{t} \right), \left(\frac{k_2}{t}, \frac{k_3}{t} \right), \dots, \left(\frac{k_{t-1}}{t}, \frac{k_t}{t} \right) \right] / k_1 < k_2 < k_3 < \dots < k_{t-1} < k_t$$

Henceforth, the policy maker attempts to manage the capital account in such a way to be convenient with the aspirations waited from FDI and the economic and financial status of the hosting country. In this context, FDI follows the trend of the capital account liberalization toward the point of convergence that maximizes the spillovers of FDI conveniently with the development stages recorded in the country. Thus, it is necessary to assume a point of convergence between FDI and CAL as follow:

$$|FDI(k_t) - CAL(k_t)| \leq \beta^k E^* / E^* \text{ is the efficiency point} \quad (9)$$

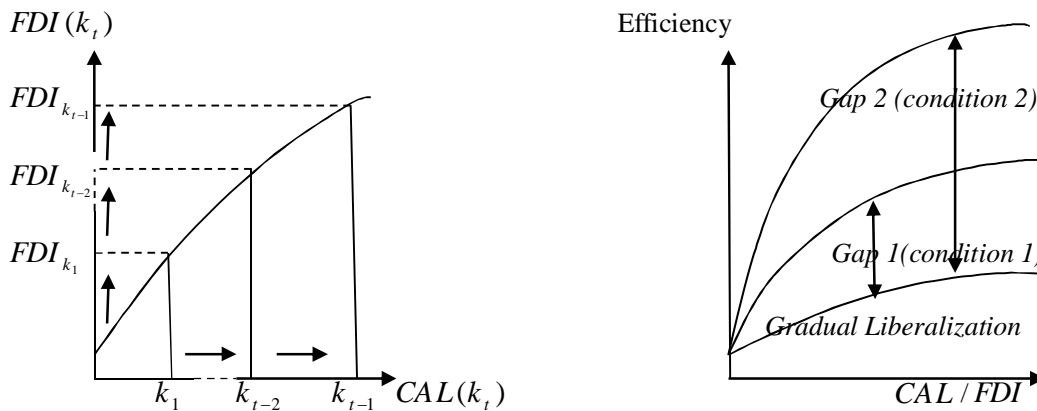
The efficiency point is the point on which the policy maker tends to attain in attracting FDI. This point ensures the realization of the FDI benefits at maximum conveniently with the state of the art of both financial and economical development of the hosting country.

The objective of the liberalization is reach the possible peak of FDI by preserving the harmony in mechanisms between the capital account and this kind of investment in order to avoid any kind of friction that may occur and damper the positive impact of CA on FDI:

$$|FDI(k_t) - CAL(k_t)| \leq |FDI(k_{t-1}) - CAL(k_{t-1})| \leq |FDI(k_{t-2}) - CAL(k_{t-2})| \leq \dots \leq |FDI(k_0) - CAL(k_0)| \approx E^* \quad (10)$$

$$(10) \Rightarrow \left| \frac{\partial FDI(k_t)}{\partial CAL(k_t)} - CAL(k_t) \right| \geq \left| \frac{\partial FDI(k_{t-1})}{\partial CAL(k_{t-1})} - CAL(k_{t-1}) \right| \geq \left| \frac{\partial FDI(k_{t-2})}{\partial CAL(k_{t-2})} - CAL(k_{t-2}) \right| \geq \dots \geq \left| \frac{\partial FDI(k_0)}{\partial CAL(k_0)} - CAL(k_0) \right| \geq FDI_0 \quad (11)$$

The positive impact of CA on FDI is gradual and converges toward the optimum point (the point on which the gap between FDI and CA is the widest one). This point is indeed the situation of the most efficient harmony between the strategies to liberalize the capital account and the foreign direct investment. This trend is shown graphically as follow:



Condition 2 is better than condition 1

Figure. 2. Efficiency of liberalization and FDI flows

Source: the researchers

4. Capital account liberalization and market imperfections:

The market imperfections denote the distortions that may occur between the parties of the transaction. This concept refers especially when market does work well in transmitting all the necessary information about the functioning of buying and selling processes as well as the quantities and prices adopted to engage in the transaction. In this context, capital account liberalization pushes the market to submit to the rules of the liberalization. It is by this sense considered as an engine fortifying the existence of the liberalized market doctrine and the information transparency between the transaction parties. Indeed, the level of the liberalization induces those parties to transact according to the market law and under the heading of supply-demand forces. By reducing the market imperfections, the foreign investor will be ensured that the economic and the rationality mechanisms are applied in the host country, and this is a sign to boost the FDI inflows in that country. The level of the distortion eliminated depends on both the efficiency of the capital account and the economic and financial developmental states of the host country. Market imperfection is an endogenous variable which its degree is reduced via the continual impact of the liberalization of the foreign direct investment. The more efficient the mechanism of the liberalization impact on attracting foreign direct investment, the more efficient is that mechanism to reduce the imperfections of the markets. From the above relation:

$MI_t < MI_{t-1} < MI_{t-2} < \dots < MI_1 < MI_0$ / MI is the market imperfection. This process is shown graphically as follow:

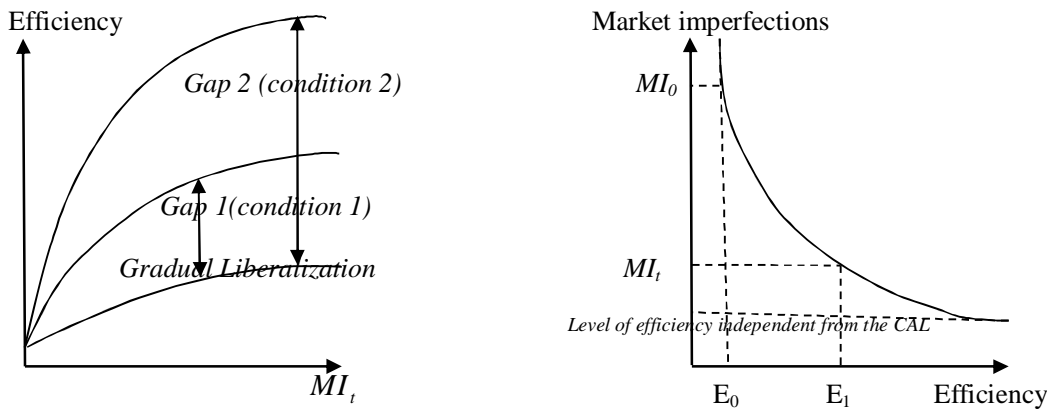


Figure. 3. The efficiency of the liberalization mechanism and the market imperfection

Source: the researchers

Therefore, the mechanism of the capital account liberalization is governed by increasing the market distortions. Once the market is efficiently managed, this will lead to attract more foreign investment because the latter finds a suitable platform to increase profits and decrease costs. In this context, the strategy of the capital account liberalization follows a pyramidal shape that contains the below gradual steps:

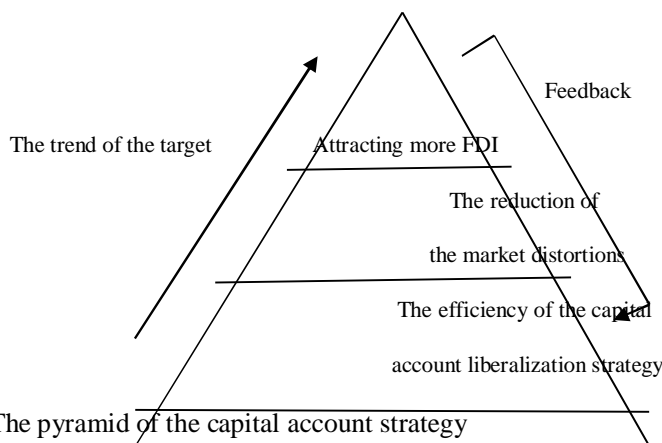


Figure. 4. The pyramid of the capital account strategy

Source: the researchers

Conclusion:

The paper presents the mechanisms to strengthen the power of the capital account liberalization in attracting the foreign direct liberalization. In this context, it should to be mentioned that the strategy of the liberalization must be a cautious and an attentive process taking into account the economical, financial as well as the socio-cultural conditions of the hosting country. The liberalization process without respecting the developmental levels of the host country leads inevitably to negative results and harsh consequences (financial and economic crises).

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