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# Percepções kaleckianas sobre heterogeneidade estrutural

# Kaleckian insights on structural heterogeneity

# Perspectivas kaleckianas sobre heterogeneidad estructural

**Julia Juarez Garcia**[1]
**Juan Carlos Moreno-Brid**[2]

**Resumo:** Este artigo tem como objetivo aprofundar as contribuições de Michal Kalecki para o desenvolvimento econômico através de seu modelo seminal Departamental. Essencialmente, busca responder à seguinte pergunta: Como a perspectiva teórica de Kalecki sobre desenvolvimento econômico aprimora nossa compreensão da heterogeneidade estrutural conforme definida pela Comissão Econômica para a América Latina e o Caribe (CEPAL)? Além disso, argumentamos que as contribuições de Kalecki para o desenvolvimento econômico, ao aprimorar nossa compreensão dessa heterogeneidade, identificam maneiras de superá-la.

**Palavras-chave:** Heterogeneidade estrutural, Kalecki, Desenvolvimento econômico, Heterodoxo.

**Abstract:** This article aims to delve into the contributions of Michal Kalecki to economic development through his seminal Departmental model. Essentially it aims to answer the

[1]PhD Candidate in Economics at National Autonomous University of Mexico (UNAM); ORCID: https://orcid.org/0009-0002-8269-6066; email: julia.juarez.garcia@comunidad.unam.mx.
[2]Professor at National Autonomous University of Mexico (UNAM); ORCID: https://orcid.org/0000-0003-2238-0019; email: juancarlosmorenobrid@gmail.com.

following question: How does Kalecki's theoretical perspective of economic development enhance our comprehension of structural heterogeneity as defined by the Economic Commission for Latin America and the Caribbean (ECLAC)? In addition, we argue that Kalecki´s contributions to economic development by improving in our understanding of such heterogeneity, identifies ways to overcome.

**Keywords:** Structural heterogeneity, Kalecki, Economic development, Heterodox.

**Resumen:** Este artículo tiene como objetivo profundizar en las contribuciones de Michal Kalecki al desarrollo económico a través de su modelo seminal Departamental. Básicamente, busca responder a la siguiente pregunta: ¿Cómo la perspectiva teórica de Kalecki sobre el desarrollo económico mejora nuestra comprensión de la heterogeneidad estructural tal como la define la Comisión Económica para América Latina y el Caribe (CEPAL)? Además, argumentamos que las contribuciones de Kalecki al desarrollo económico, al mejorar nuestra comprensión de dicha heterogeneidad, identifican formas de superarla.

**Palabras clave:** Heterogeneidad estructural, Kalecki, Desarrollo económico, Heterodoxo.

## Introduction

Michal Kalecki (1899-1970), in a series of documents published in Poland in 1933 -a few years before Keynes's seminal work- laid the groundwork of his theoretical perception of the dynamics of developed capitalist economies as driven by effective demand (Ghosh, 2005). A key insight of his view is that in demand-driven economies, involuntary unemployment can arise due to three reasons: i) insufficient private investment, ii) weak domestic consumption in contexts of highly concentrated income distribution, and iii) public policy decisions on economic and social matters. With such analytical tools, complemented with his empirical work in semi-industrialized nations, Kalecki was able to identify the, say, structural obstacles that hinder the long-term expansion of developing economies.

Such identification was an important element in his analysis of inflation in emerging economies. He argues that, in these economies, inflationary pressures are rooted in an insufficient food supply so that, in this regard, the agricultural sector is a key constraint of growth. Such insight, in due course and from quite independent work, became a pillar of the Latin America´s economic thought.

On the other side of the Atlantic, and somewhat later, the Economic Commission of Latin America and the Caribbean (ECLAC), was producing key analysis of the region´s development challenges and constraints. This analysis came to be known as Latin American Structuralism, a major school of economic thought in the developing world. In this regard, one of ECLAC's main contributions was the notion of structural heterogeneity, by Pinto

(1973); defined as a situation where there are broad differences in labor productivity levels within and between the different sectors of economic activity (Cimoli & Porcile, 2014). Another was the notion of inflation rooted in constraints of staples as well as on inertial dynamics.

Given these similarities, the following question naturally arises: To what extent and how does Kalecki's analytical perspective of economic development helps to better understand, ECLAC´s notion of structural heterogeneity? As we claim here, some of Kalecki's contributions, in particular his seminal Departmental Model, sheds light on some aspects of the dynamics of production and employment under the conditions of structural heterogeneity that mark Latin America, as seen through ECLAC´s perspective.

The document is organized as follows: after this introduction, the first section explores structural heterogeneity as interpreted by ECLAC; with some emphasis on key characteristics of employment. The next one presents, in a very synthetic way, Kalecki's Two-Department model. The third section identifies a number of implications of this model to explain structural heterogeneity. The fourth and final one shares our conclusions.

## 1. Structural Heterogeneity and ECLAC

The notion of structural heterogeneity, or more generally the structuralist school of economic thought, was built through contributions -based on historical analysis and economic theory by Raul Prebisch and other intellectual pioneers of development economics closely associated to the Economic Commission of Latin America. They include Celso Furtado, Aníbal Pinto, Juan Noyola Vázquez, Osvaldo Sunkel, José Medina Echavarría and Jorge Graciarena among others[3]. This school, as rooted in writings of initially Prebisch and later of Pinto and others, stated that Latin America´s development and its challenges are characterized by:

i) A productive structure specialized in primary goods, highly concentrated, with limited intersectoral links and vertical integration.

ii) Highly heterogeneous levels of labor productivity both between and within its industries as well as in comparison to the levels prevailing in the industrialized nations.

iii) A virtually unlimited supply of labor. with earnings, close to the subsistence level, of a substantial proportion of those employed.

3 See Bielschowsky (2009)

iv) An entrepreneurial sector with very limited capacity or inclination to invest in technical progress, research, and innovation, and modernize its fixed capital (plants, machinery, and equipment)

These structural traits of Latin America, as various analysts argued, are perpetuated in an asymmetric relation between the "Center" (composed by fully industrialized nations specialized in manufactured who invest heavily in research and development) and the "Periphery" (formed by less developed economies, at best semi-industrialized, specialized in primary products, and subject to a long-term deterioration of their terms of trade vis-a-vis the Center).

During the 1950s and 1960s, particular attention was put by a group of development economists on how the evolution of the dependency relationship widened the gap between the Center and the Periphery. Indeed, contrary to the predictions of orthodox thinking, in these decades the evolution of world trade and technological development was accompanied by a widening of the gap[4]. Indeed, in a vicious circle rooted in the economic structure, the region´s scant technological innovation, its form of insertion in world trade and finance in combination with weak institutions creates binding restrictions on Latin America´s long-term rate of expansion of activity and employment[5].

As pointed out above, structural heterogeneity´s most evident manifestation is in the acute differences in technological levels intra e inter industries. These differences are related to contrasting evolutions of labor productivity, of investment and, certainly, of the paths of expansion of GDP of the various industries. In turn, these differences -in the context of a conspicuous contingents of surplus labor- affect the evolution of employment and earnings in the respective industries, and in this way tend to exacerbate income inequality.

In this process there is scant incentive to introduce modern technologies to transform the economy´s structure and, thus, it is more difficult to enter a trajectory of high, sustained economic expansion. And, as a consequence, the little capacity for job creation tends to perpetuate the phenomenon of structural underemployment[6]. As Bielchowsky reminds us, Celso Furtado was one of the first to conclude that, to overcome structural underemployment, it is indispensable to diversify the economy´s productive and trade structures. Indeed, in Latin America, the over-abundant labor, coupled with slow job creation due to lack of investment

4 For a deeper analysis of this issue see See Cimoli and Porcile, (2014).
5 Bielschowsky (1998) has stressed the importance placed by the Structuralist School on the weaknesses of key institutions as an hindrance to Latin America´s development and economic growth
6 The phenomenon can be attributed to two key factors. First, the migration of labor from rural to urban areas, leads to engross underemployment in the cities. Second, high rates of population growth contribute to perpetuate an excess supply of labor in the economy (Rodríguez, 2006)

and the predominance of capital-intensive technologies, resulted in a regressive distribution of income (See Beteta and Moreno-Brid, 2012).

During the 1980s and 1990s, the theoretical framework of the Structuralist School at ECLAC, influenced by the works of Fajnzylber (1983, 1990), began to put more emphasis on the nexus between income distribution and economic growth. This revision eventually took shape in the form of the so-called Neo-structuralist theory of development. A key element of this analytical perspective was still the prevalence of a dual system in the world economy, in which a homogeneous, highly diversified and technologically sophisticated Center coexisted with a semi-industrialized Periphery marked by a highly heterogenous productive structure - in term of labor productivity- but very concentrated in very few products.

Trade between these two “poles” widens economic inequalities by, in particular, the transfer of the benefits of technical progress to the Center, which in turn stimulates investment, innovation and research, boosting more its productivity vis a vis the Periphery. In brief, structural heterogeneity entries in a vicious circle that, say, feeds itself and becomes the cause and the consequence of underdevelopment. In summary, as Rodríguez (1998) stated, structural heterogeneity may be defined through the special characteristics and dynamics of the productive structure or the occupational structure. Each perception is "the mirror image of the other."

According to what eventually became the Structuralist School, to get out of this far from positive development path, Latin America must implement a comprehensive agenda of public policies aimed at two broad objectives. The first one is to stimulate fixed capital accumulation and technical progress, as a means to change the region´s insertion in the world economy. The second is to reduce poverty and inequalities and thus improve the well-being of the population.

The theoretical and empirical literature on structuralism, and neostructuralist, has marked how we understand the dynamics, determinants, obstacles and challenges of development, in particular, in Latin America´s economic history. The goal of this article is shed some light on certain key aspects of Structuralism´s vast contribution to knowledge through the lens of Kaleckian theory. We believe that by doing this, we provide some inputs for a deeper understanding of the region's structural heterogeneity by linking the Kaleckian analysis of a dual economy[7].

7 It may be relevant to point out that Kalecki's view of the two-sector model is sometimes compared to Lewis's work on dual economies. According to Ros (2013), both authors emphasize that the available fixed capital stock in underdeveloped countries is insufficient to employ the entire labor force. However, according to López and

## 2. Kalecki´s two-department model

To understand Kalecki's view of structural heterogeneity, we take as a starting point the two-department model he put forward in *The problem of financing economic development*[8]. In his perspective, the crucial challenge confronting underdeveloped economies lies in their need to significantly increasing investment, as the private sector is unable or unwilling to do it at a fast enough pace.

To ease the analysis, we focus on a very simple version of the model that assumes away the foreign sector as well as the government. In this version, the economy consists of: i) Department I (D_1) which produces capital goods. In other words, its output equals the total investment of the economy, and ii) Department II (D_2) which produces consumer goods; its output is the economy´s total consumption[9].

The model also assumes the existence of three social classes: i) workers, ii) small property owners, and iii) capitalists. The first two classes consume all their income, i.e. they are unable to save. The third one saves a proportion of its profits. Thus, the whole economy´s savings are the savings of capitalists from their profits.

Consumption of all involved in Department I is supplied by Department II; i.e., the part of its output (income) that remains after meeting the consumption needs of its workers, small proprietors, and capitalists. Thus, savings of Department II are the consumption of Department I.

$$C_1 = S_2 \qquad (1)$$

From equation (1), we add the savings of Department I on both sides, then:

$$C_1 + S_1 = S_2 + S_1 \qquad (2)$$

$$I = S \qquad (3)$$

Assous (2010), there are substantial differences linked to the marginal product of labor assumed by Lewis (1954).

8 This study emerged from a lecture he delivered in 1953 at the Center for Latin American Monetary Studies in Mexico City. It embodies his reflections during his tenure in the Economics Department of the UN Secretariat (López and Assous, 2010).

9 *"By investment, we will understand ... the production destined for the accumulation of inventories. In Department I, we will include the production corresponding to the accumulation of inventories, both of capital goods and consumer goods..." (Kalecki 1955, p.382)*

On the left-hand side of equation (2), we have the output of Department I, which is the investment (I) of the economy. On the right-hand side, we have the sum of savings of capitalists from both departments, in other words, we have total savings (S).

We introduce Kalecki's (1969) theory of (optimal) price formation in the model. This requires differentiating between industrial and agricultural goods in Department II. And to assume that the former "subsector" meets rises in demand through adjustment in quantities; given an underutilized production capacity. In the latter subsector, such adjustment to changes in demand is done through prices due to (short-term) supply constraints. Now, it should be evident that, in this simple model, an increase in investment (in output of Department I) requires an increase in consumption of agricultural goods by workers in Department I. If the capacity of the agricultural subsector is insufficient, this increase in demand will lead to a rise in price, to inflationary pressures.

Based on his simple analytical framework, Kalecki explores two scenarios of an increase in industrial production. A first scenario assumes that this increase in output is driven by enhanced productivity; the second one by rural-urban labor migration. He concludes that the latter -but not the former- unavoidably leads to inflationary pressures. Thus, he recommends a, say, pricing cum structural transformation agenda aimed at ensuring that e productivity growth is "aligned" to meet the changes in demand brought about by higher employment linked to the rural-urban migrations/displacements that typically accompany development processes in agricultural, semi-industrialized nations:

> "The optimum pattern falls usually between these two extremes: the increase in industrial production should be based on the rise both in productivity and in employment." (Kalecki, 1955:10)

In this context, migration from rural to urban areas (a.k.a labor displacement) leads to an improvement in the standard of living, to the extent that employment conditions in urban areas offer all in all a better quality of life. Thus, besides acknowledging the importance of increasing peasant income and the supply capacity of staple/agricultural goods, Kalecki emphasizes that labor displacement is a crucial element of economic development process itself; the key element to alleviate structural underemployment.

In this way, the process that resolves the optimal circuit between labor displacement and increased productivity (without generating inflationary pressures) would have to be based on an increase in the installed productive capacity of Department I (and therefore of hired

labor), which stimulates the demand for agricultural and industrial goods. The creation of internal demand would have the two desired implications of the process[10].

In summary, the key point is the creation of the missing installed capacity in Department I, which stimulates the demand for goods in consumer industries, allowing for the transfer of inter-industrial labor, thus representing an inherent feature of the path towards overcoming structural heterogeneity.

## 2.1. Some additional reflections on investment

As mentioned above, Kalecki stressed that underdeveloped economies face, at the same time, an underutilization of productive capacity and an urgent need to boost investment. He argues that, in fact, such underutilization is an inherent feature of capitalism. The reason behind this spare capacity is, in his view, a chronic insufficiency of effective demand. In other words, lack of effective demand prevents any type of long-run convergence to full use of productive capacity.

In the context of the Two-Department Model where workers save none of their income, -i.e. total savings entirely consists of capitalist savings- the level of employment is fully dependent on the dynamism of investment. If it is weak, part of the output will remain unsold, leading to inventory accumulation. The increase in inventories introduces recessionary forces in the economy. Total output will fall to the level where savings correspond to the new, lower-level investment. The contraction of output (consumption and savings) adversely affects employment.

The simple model can be easily extended to include the public sector, so that national output/income depends positively on government expenditure and negatively on net taxes minus subsidies. In this case, a reduction in private investment can be compensated by government spending -with either a deficit or a balanced budget in fact- to ensure full employment of resources. This expansion of public expenditure will translate in an increase in profits; thus, stimulating private investment. Conversely, taxing profits to finance government spending reduce capitalist´s income, and in turn reduces their consumption and eventually investment.

10 This behavior presupposes a closed economy. The authors acknowledge Gabriel Porcile's observation concerning the conditions of Department I in the region: "Increases in productivity demand expanding Department I at the national level. However, the region (or many countries in the region) is not competitive in that department. If expanded nationally, it may lead to more, not less, inflation, and that's where the other variable Kalecki talks about comes into play. There is an unresolved tension. If capital goods are imported, then the issue may arise from the external side." For a more precise consultation on open economy economics, refer to Kalecki, M. (1934 [1971]).

Kalecki notes that in developed economies, a key problem is not the expansion of the fixed capital stock but ensuring an adequate level of effective demand to fully employ the workforce. In contrast, in developing economies, even if the entire fixed capital stock is fully utilized, a substantial portion of the labor force may involuntarily unemployed. In other words, the challenge of policy makers in developed nations is to stabilize the economy around a full-employment path or trend. However, in developing ones, the challenge is to stimulate investment -expand their fixed capital stock of machinery and equipment- in order to absorb the structurally unemployed. Putting it differently, their challenge is rooted much more in the insufficiency of existing productive capacity than in its under-utilization. Investment´s role in the former is to help stabilize the economy under fluctuations of effective demand; in the latter it is much more to expand the stock of machinery and equipment.

## 3. Rethinking structural heterogeneity under the light of Kalecki´s perspectives

Kalecki´s Two-Department model and his work derived from it on the obstacles faced by underdeveloped economies and by developed ones in their quest for growth has been recognized for their influence on structuralism (Arndt,1985). In fact, his theoretical framework, combined with insights of Noyola (1956) and of Sunkel (1958), helps to better understand the structuralist school´s claim that labor market institutions play a key role in detonating or fueling inflation pressures (Ros, 2013). López & Assous (2010) argue that Kalecki's contributions to Structuralism go even further in the identification of factors that constrain capital accumulation and long-term growth in underdeveloped economies.

As we have argued, his analysis of structural underemployment is an important input to explain structural heterogeneity. On a related topic, Ros (2013) points out that the unemployment resulting from structural rigidities proposed by Kalecki does not conform to the Keynesian paradigm who sees unemployment as heavily influenced by effective demand. Neither it is associated to the Classical perspective as it is not related to rigidity in real wages. Indeed, Kalecki´s structural unemployment cannot be solved through conventional mechanisms of effective demand, as it is rooted in an insufficiency of the stock of fixed capital, its capacity to create employment and the size of the labor force.

On further contributions to this issue, Rodríguez (1998) notes that structural heterogeneity in many ways is a determinant of structural underemployment. And as Pinto

(1973) adds, among the factors behind this phenomenon is the concentration of the "fruits of technical progress" in the Center.

The Kaleckian dual economy's optimal process highlights the limits of demand management to address structural underemployment. It also helps to put in perspective the role of inflation as an obstacle to economic growth:

> "It should be noted that it is the lack of adequate markets that was frequently considered the main obstacle of development rather than the danger of inflation." (Kalecki, 1955:7)

Thus, economic policies and regulations, in general, and public investment in particular can be crucial to create or strengthen key markets. Regarding the agricultural sector, promoting conditions or putting in place incentives to augment its supply capacity, as well as ensuring its appropriation of the benefits from increased agricultural prices or productivity would go a long way in the removal of constraints to growth. On the other hand, fostering endogenous conditions to strengthen the domestic market through a more progressive income redistribution are essential.

In conclusion, Kalecki's simple two-sectoral model underscores the significance of addressing structural heterogeneity through the expansion of the stock of fixed capital and rural-urban labor displacement as a path towards development. These processes ae accompanied by a reinforcement, or stimulus of internal markets -demand and supply- in order to alleviate inflationary pressures.

## Concluding remarks

Kalecki's departmental model aimed to understand the challenges of less developed countries in their quest for robust economic growth with full employment and minor inflationary pressures. As he stressed, of utmost importance are the trajectory of investment as well as the evolution of agricultural output vis a vis with rising demand. As we pointed out, labor displacements an additional force that must be carefully monitored.

ECLAC's emphasis on heterogeneity identifies policy measures that may help to alleviate structural underemployment resulting from bottlenecks or from other obstacles that block the spread of benefits to the workers that arise due to innovation, technological progress and, in brief, higher productivity. The Commission's approach aligns well with Kalecki's analysis on structural heterogeneity.

## References

Arndt, H. W. (1985). The origins of structuralism. World Development, 13(2), 151-159.

Beteta, H., & Moreno-Brid, J. C. (2012). El desarrollo en las ideas de la CEPAL. Economía UNAM, 9(27), 76-90.

Bielschowsky, R. (1998). Evolución de las ideas de la CEPAL. Revista de la CEPAL, vol. 21, p. 45.

Bielschowsky, R. (2009). Sesenta años de la CEPAL: estructuralismo y neoestructuralismo. Revista de la CEPAL.

Cimoli, M. & Porcile, G. (2014). Technology, structural change and BOP-constrained growth: a structuralist toolbox. Cambridge Journal of Economics, 38(1), 215-237.

Fajnzylber, F. (1983). La industrialización trunca. México D.F.

Fajnzylber, F. (1990). Industrialización en América Latina: de la caja negra al casillero vacío: comparación de patrones contemporáneos de industrialización. CEPAL.

Ghosh, J. (2005). Michal Kalecki and the economics of development. En The pioneers of Development Economics: Great Economists on Development. London: Zed Books.

Kalecki, M. (1934 [1971]). On foreign trade and 'domestic exports'. En Selected Essays on the Dynamics of the Capitalist Economy, 1933-1970 (págs. 15-25). Cambridge: Cambridge University Press.

Kalecki, M. (1955). The problem of financing of economic development. Indian Economic Review, 2(3), 1-22.

Lewis, W. (1954). Economic development with unlimited supplies of labour. The Manchester School, 22(2), 139-191.

López J. & Assous M. (2010). Michal Kalecki. Londres: Palgrave Mcmillan.

Noyola, J. (1956). El desarrollo económico y la inflación en México y otros países latinoamericanos. Investigación Económica, 16(4), 603-648.

Pinto, A. (1973). Heterogeneidad estructural y modelo de desarrollo reciente de la América Latina. Naciones Unidas Comisión Económica para América Latina y el Caribe (CEPAL).

Rodríguez, O. (1998). Heterogeneidad estructural y empleo. Revista de la CEPAL.

Rodríguez, O. (2006). El estructuralismo latinoamericano. Siglo XXI.

Ros, J. (2013). Rethinking Economic Development, Growth and Institutions. Oxford: Oxford University Press.

Sunkel, O. (1958). La inflación chilena: Un enfoque heterodoxo. El Trimestre económico, 25(100 (4), 570-599.