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Responsibility and Economic development: Highlighting the Current Road of Capitalism Towards Sustainability Using the Increasing Responsibility Framework

By

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Abstract

There are three types of capitalism paths, the fully irresponsible one, the partially responsible one, and the fully responsible one. From 1776 when Adam Smith published “The Wealth of Nations” to 2012 the capitalist world was under fully irresponsible economic development accumulating social and environmental deficits in the process, which led to the death of Adam Smith’s world and prompted the 2012 shift towards green markets and the birth of green capitalism. Notice that when business as usual is no longer possible under fully irresponsible paradigms(e.g. bare capitalism) they shift to partially responsible paradigms(e.g., green markets, red markets). And notice that in the future when business as usual under partnership based paradigms no longer works due to sustainability gap pressures they will shift towards fully responsible paradigms(e.g. sustainability markets). No much seems to be written about the role of responsibility in the evolution of economic development paradigms or capitalism despite that there seems to be a one to one relationship between paradigm shifts and increasing responsibility. Among the goals of this paper is to introduce a capitalism based increasing responsibility framework that can be used to point out that as economic paradigms shift, in general and currently, from less responsible forms to more responsible ones they are moving slowly towards sustainability, the most responsible economic development paradigm possible.

Key concepts

Fully Irresponsible Capitalism, Partially Responsible Capitalism, Fully Responsible Capitalism, Adam Smith, Traditional Markets, Paradigm Evolution, Paradigm Shifts, Capitalism Based Responsibility Framework, Capitalism Based Increasing Responsibility Framework.

Introduction

a) Unclear responsibility based capitalism

Unclear responsibility based economic models should be expected to send over production and over consumption signals to markets as they do not need to account for the cost of the externalities they create. Under these conditions a rational decision maker should be expected to act to maximize the production and consumption as they are getting a windfall as externality making is free; and therefore these externality costs are not reflected in the pricing mechanism of the market.

For example, under the traditional market generating social and environmental externalities was free of cost, which through time has led to social and environmental crises. The environmental crisis has led to the death of Adam Smith's traditional market and to the 2012 shift to green markets(Muñoz 2016a) to finally account for the environmental cost of production making the economy now environment friendly and internalizing once for all the environmental externality in the pricing mechanism of the traditional market.

Notice that since these markets do not reflect all the costs of production in their pricing mechanism they are distorted markets. Figure 1 below summarizes the structure of unclear responsibility based capitalism(CP):

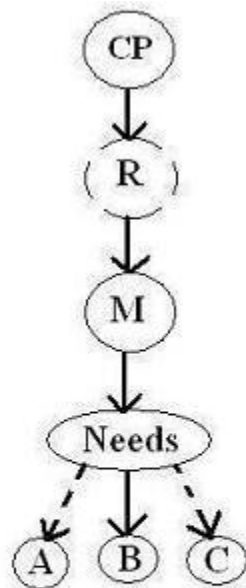


Figure 1 Unclear responsibility based capitalism(CP)
Only the economic impacts matter(B) as
social(A) and environmental(C) responsibility
was assumed away.

Figure 1 above tells us that capitalism(CP) based development goes through a responsibility(R) hole as indicated by the broken circle signaling markets to meet needs at the expense of other needs. Unclear responsibility allowed Adam Smith to assume social and environmental externality neutrality. The more production costs are left out of the pricing mechanism the easier is to advance specific goals. For example, leaving out social and environmental cost of production made it possible for the economy only model of Adam Smith to advance the economic goal.

b) Clear responsibility based capitalism

Clear responsibility based economic models should be expected to send the right production and consumption signals to markets as they would account for the cost of the externalities they create. Under these conditions a rational decision maker should be expected to act to produce and consume efficiently as they are not getting a free windfall as now externality making is not free; and therefore these externality costs are now reflected in the pricing mechanism of the market.

For example, if the traditional market would have accounted for the cost of the social and environmental externalities it creates since 1776 we would probably not have the social and environmental crises we have today and we would have been living in a sustainability market based world or if the traditional market would have accounted for the environmental externalities it creates it would have been already a green market and the environmental crisis would not be as it is today. Higher prices would have discouraged over production and over consumption behavior(Muñoz 2012).

Figure 2 below summarizes the structure of clear responsibility based capitalism(CP).

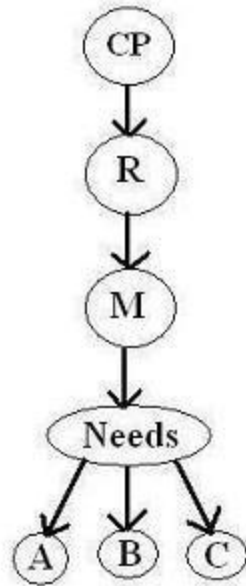


Figure 2 Clear responsibility based capitalism(CP)
 Now all capitalism impacts matter,
 economic(B), social(A) and environmental(C)

Figure 2 above says that capitalism(CP) follows the responsibility(R) rule as indicated by the unbroken circle signaling markets to meet needs respecting other needs. Clear responsibility would not have allowed Adam Smith to assume social and environmental externality neutrality. Under clear responsibility he would have been forced to internalize all social, economic and environmental production components in his model and reflect them in the pricing mechanism of this market.

c) The need for more responsible capitalism models

From 1776 when Adam Smith published “The Wealth of Nations” to 2012 the capitalist world was under fully irresponsible economic development accumulating social and environmental deficits in the process. Adam Smith sent us into a world of distorted markets(Muñoz 2012) as he assumed full externality neutrality when stating the structure of the traditional market(Muñoz 2015a). And in 1987 the Bruntland Commission(WCED 1987) called for social and environmental inclusion/ internalization in development as business as usual was no longer possible. Answering this call gave us three options to move forward, a partially responsible option: going green markets; a partial responsible option: going red markets; and a fully responsible option: going sustainability markets.

This opened the door for a period of sustainable development trials(1987-2012), a process that ended up with the 2012 shift to green markets(UNCSD 2012a; 2012b). Green growth is now the way to the green economy(UNDESA 2012; OECD 2015a; OECD 2015b; WB 2016). It has been pointed out that going green in 2012 was not the only option(Muñoz 2016a). Green markets are environmentally responsible economies, economies where environmental costs are now accounted for in the pricing mechanism of green markets. The structure of the

perfect green markets was recently highlighted (Muñoz 2016b). Green markets send the right signal to green producers telling them that polluting less to meet the demand for lower and lower pollution based product and services champion by green consumers is good for business. And therefore the need for more responsible capitalism led to the death of Adam Smith's world and prompted the 2012 shift towards green markets and the birth of green capitalism.

In summary, notice that when business as usual is no longer possible under fully irresponsible paradigms (e.g. bare capitalism) they shift to partially responsible paradigms (e.g., green markets, red markets). And see that in the future when business as usual under partnership based paradigms no longer works due to sustainability gap pressures they will shift or are expected to shift towards fully responsible paradigms (e.g. sustainability markets). As responsibility becomes binding externality cost accounting from partial to full accounting becomes binding. Externality cost accounting allows us to link all possible markets through their pricing mechanism (Muñoz 2016c). Hence the road of capitalism appears to be shifting step by step (Muñoz 2015b), wave by wave (Muñoz 2016d), towards full responsibility; and therefore, towards sustainability markets. The structure of the perfect sustainability market has been recently discussed (Muñoz 2016e) as well as ideas on how these responsibility framework and increasing responsibility framework can be framed too from the general development point of view has just been shared (Muñoz 2016f). No much seems to be written about the role of responsibility in the evolution of economic development paradigms despite that there seems to be a one to one relationship between paradigm shifts and increasing responsibility. In other words, there seems to be a need for more responsible capitalism models, but there are not clear analytical tools that can be used to capture this need for increasing responsibility together with the different capitalism options possible and to link them to paradigm evolution and shifts from less stable to more stable capitalism models. Among the goals of this paper is to introduce the capitalism based increasing responsibility framework that can be used to point out that as economic development paradigms shift, in general and currently, from less responsible forms to more responsible ones they are moving towards sustainability, the most responsible capitalism paradigm possible.

Objectives

i) To highlight the structure and implications of capitalism under different types of responsibility; ii) To show that putting them together they make up a useful capitalism based responsibility framework; iii) To point out that paradigm shifts transform the capitalism responsibility framework into the capitalism increasing responsibility framework; iv) to stress that the responsibility road of capitalism in the long term leads towards full responsibility; and therefore, towards sustainability markets; and v) to indicate how the capitalism increasing responsibility framework can be transformed into the current capitalism increasing responsibility framework and used to highlight the structure of the traditional market, the structure of the shift towards green markets, and the structure of the shift towards sustainability markets.

Methodology

First, the terminology used in this paper is given. Second, merging rules, model structure simplification rules, operational concepts and frameworks are indicated. Third, the structure and implications of capitalism under different types of responsibility, fully irresponsible, partially responsible and fully responsible is shared. Fourth, the different types of capitalism are put together to create a capitalism responsibility framework. Fifth, the increasing responsibility framework of capitalism capturing the direction of paradigm shifts is provided. Sixth, the frameworks above are used to stress that the final stop in the shifting responsibility road of capitalism is the fully responsible one, the sustainability market. Seventh, the capitalism increasing responsibility framework is transformed into the current capitalism increasing responsibility framework and used to derive the structure of the traditional market, the structure of the shift to green markets and the structure of the shift towards sustainability markets. And finally some food for thoughts and relevant conclusions are listed.

Terminology

A = Dominant/active society	a = Dominated/passive society
B = Dominant/active economy	b = Dominated/passive economy
C = Dominant/active environment	c = Dominated/passive environment
D = Development	R = Responsibility
FI = Fully irresponsible	PR = Partially responsible
FR = Fully responsible	M = Markets
M1 = Irresponsible markets	M2 = Partially responsible markets
M3 = Fully responsible markets	S = Sustainability market
TM = Traditional market	GM = Green market
RM = Red market	RSM = Red socialism market
ENM = Environmental market	SENM = Socio-environmental market
ECM = Economic margin	SM = Social margin
EM = Green margin	GP = Green market price
RP = Red market price	P = Traditional market price

i = Profit

EE = Environmental externality

FE = Full externality assumption

PE = Partial externality assumption

NE = No externality assumption

FEX = Fully exclusive

PEX = Partially exclusive

NEX = No exclusion

CP = Capitalism

CP1 = Irresponsible capitalism

CP2 = Partially responsible capitalism

CP3 = Fully responsible capitalism

Merging rules, model structure simplification rules, operational concepts and frameworks

i) Merging rules

If “A” and “B” are dominant characteristics; and “a” and “b” are their dominated or passive counter parts, the following is expected:

a) *Merging under dominant-dominant interactions*

Under these conditions, dominant or active state prevails as indicated:

(AA) → A (BB) → B (AA) (BB) = (AB)(AB) → AB

b) *Merging under dominated-dominated interactions*

Under these conditions, the dominated or passive form prevails as shown:

(aa) → a (bb) → b (aa) (bb) = (ab)(ab) → ab

c) *Merging under dominant-dominated interactions and opened sustainability gaps*

Under these conditions, if the sustainability gaps are not closed the interacting components remain the same and merging cannot take place until the gaps are closed as shown below:

(aA) → aA (BB) → B (aA) (BB) = (aA)B

ii) Model structure simplification rules

Dominated or passive components can be treated as externalities and therefore they can be dropped from dominant interactions as indicated below:

$$M1 = ABc = AB$$

$$M2 = aBC = BC$$

$$M3 = aBc = B$$

$$M4 = Abc = A$$

iii) Operational concepts

1) Fully irresponsible model, a fully exclusion model(e.g. the traditional market or bare capitalism)

2) Partially responsible model, a partially inclusive model(e.g. the red market, the green market)

3) Fully responsible model, a fully inclusive model(e.g. the sustainability market).

4) Traditional market, the economy only market

5) Green market, the environmentally friendly market

6) Red market, the socially friendly market

7) Sustainability market, the socially and environmentally friendly market

8) Environmental or green margin, to cover the extra cost of making the business environmentally friendly or to cover only the environmental cost of environmentally friendly production or to cover the environmental cost of red market production

9) Social margin, to cover the extra cost of making the business socially friendly or to cover only the social cost of socially friendly production or to cover the cost of making green markets socially friendly or to cover the cost of making environment only models socially friendly.

10) Economic margin, to cover only the economic cost of production

11) Economic profit(i), the incentive to encourage economic activity

12) Traditional market price, general market for profit price($TMP = ECM + i = P$)

13) Green market price, the for profit price that reflects both the economic and the environmental cost of production or the price that covers the cost of environmentally friendly production at a profit($GP = ECM + i + EM = P + EM$)

14) Red market price, the for profit price that reflects both the economic and the social cost of production or price that covers the cost of socially friendly production at a profit($RP = ECM + i + SM = P + SM$)

15) Sustainability market price, *the for profit price that reflects the economic, social, and the environmental cost of production or the price that covers the cost of socially and environmentally friendly production at a profit*($SP = ECM + i + SM + EM = P + SM + EM$)

16) Green market knowledge gap, *the knowledge gap created by the paradigm shift from traditional markets to green markets or when correcting Adam Smith's model to reflect environmental concerns.*

20) Red market knowledge gap, *the knowledge gap created by the paradigm shift from red socialism to red markets or the knowledge gap created by correcting Adam Smith's traditional market to reflect social concerns*

21) Sustainability market knowledge gap, *the knowledge gap created when any paradigm shifts towards sustainability, at once or step by step.*

22) Micro-economics, *the theory of the traditional firm and consumer.*

23) Macro-economics, *the theory of the traditional economy.*

24) Green micro-economics, *the theory of the environmentally responsible firm and consumer.*

25) Green macroeconomics, *the theory of the environmentally responsible economy.*

26) Red micro-economics, *the theory of the socially responsible firm and consumer*

27) Red macro-economics, *the theory of the socially responsible economy.*

28) Sustainability market based micro-economics, *the theory of the socially and environmentally responsible firm and consumer.*

29) Sustainability based macro-economics, *the theory of the socially and environmentally responsible economy*

30) Trickle-down effect, *the expectation that traditional markets and growth will sooner or later benefit the poor*

31) Green trickle-down effect, *the expectation that green markets and green growth will sooner or later benefit the poor.*

32) Red trickle-down effect, *the expectation that red markets and red growth will sooner or later benefit the environment*

33) Deep paradigm, a fully exclusive model or fully irresponsible model(e.g. the traditional market or bare capitalism).

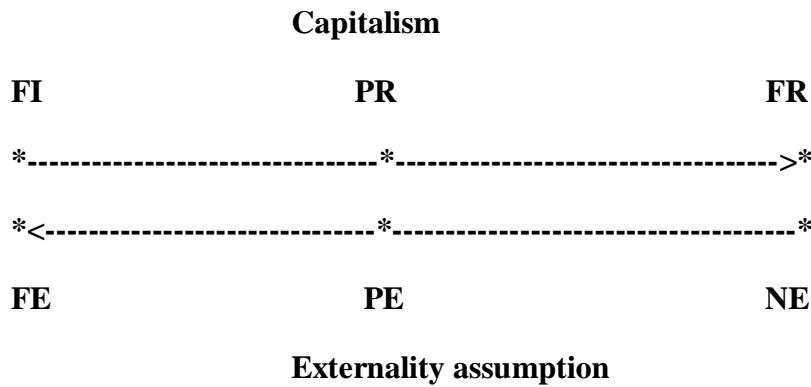
FEX

PEX

NEX

d) Linking capitalism responsibility and externality assumptions

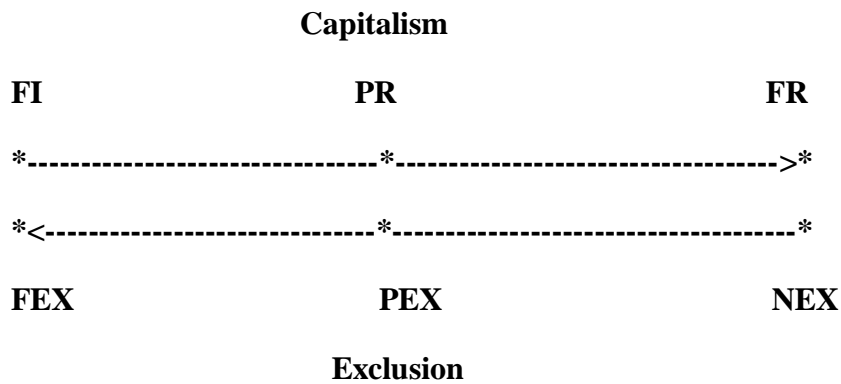
Capitalism or economic development responsibility and externality assumptions move in different directions since as responsibility increases the number of externality assumptions decreases, which is shown in the capitalism responsibility-externality assumption inversegram below:



Notice the association between capitalism or economic development responsibility and externality assumptions, fully irresponsible(FI) goes with full externality assumptions(FE) and full responsibility(FR) goes with no externality assumptions(NE).

e) Linking capitalism responsibility and exclusion

Capitalism or economic development responsibility and exclusion move also in different directions since as responsibility increases the level of exclusion decreases, which is shown in the capitalism responsibility-exclusion inversegram below:



Notice the association between capitalism or economic development responsibility and exclusion, fully irresponsible(FI) goes with full exclusion(FEX) and full responsibility(FR) goes with no exclusion(NEX).

Responsibility and capitalism(CP)

Based on responsibility there are three types of capitalism or economic development models(CP), those under fully irresponsible capitalism[CP1 = f(FI)], those under partially responsible capitalism[CP2 = f(PR)], and those under fully responsible capitalism(CP3 = f(FR)). Each type is described below in detail.

a) Fully irresponsible capitalism(CP1)

Fully irresponsible capitalism[CP1 = f(FI)] is based on full externality assumptions and full exclusion. Its structure is reflected in Figure 3 below:

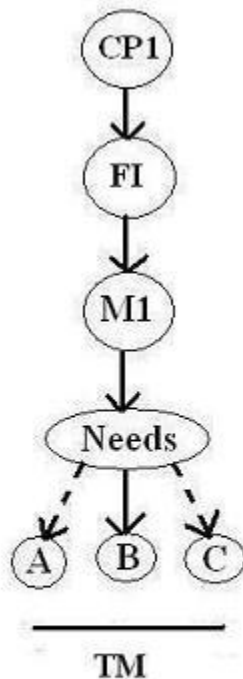


Figure 3 Fully irresponsible capitalism(CP1)
It has the structure of the perfect traditional market(TM)

Figure 3 above helps us to highlight that the structure of fully irresponsible capitalism is the structure of the traditional market model(TM = aBc = B), which assumes social and environmental externality neutrality. This makes the traditional market fully exclusive and full externality assumption based. Notice that in Figure 3 above irresponsible capitalism a la

traditional market(TM) cares only about the endogenous factor in dominance, the economy(B), it does not care about factors assumed to be external; and therefore, the cost of externalities created by these models is no reflected in the pricing mechanism of their markets. As indicated in the introduction the traditional market(TM = aBc) or fully irresponsible capitalism(CP1) was in place from 1776 to 2012 when the death of Adam Smith's world, the fall of bare capitalism, and the shift to green markets(GM) took place.

b) Partially responsible capitalism(CP2)

Partially responsible capitalism[(CP2 = f(PR)] is based on partial externality assumptions and partial inclusion. Its structure is reflected in Figure 4 below:

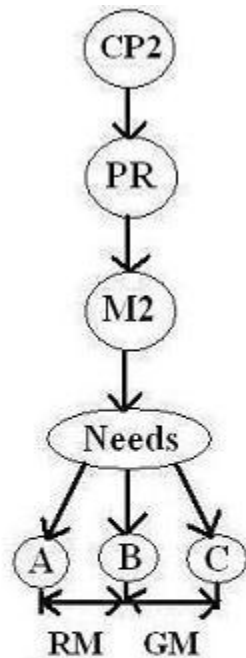


Figure 4 Partially responsible capitalism(CP2)
 There are two partial responsibility(PR) based capitalism models, the red market or socially friendly capitalism model(RM) and the eco-economic or green market model(GM).

Figure 4 above helps us to indicate that there are 2 types of partially responsible capitalism models: 1) the socially friendly economies or red markets(RM = ABc = AB), which assume only environmental externality neutrality; and 2) the environmentally friendly economies or green market model(GM = aBC = BC), which assume only social externality neutrality. All those models in Figure 4 above are partially exclusive and partial externality assumption based. Notice that in Figure 4 above each model cares only about the factors that are in partnership they do not account for the factors outside the partnership; and therefore, the cost of externalities they

create is no reflected in the pricing mechanism of those markets. As mentioned in the introduction the fully irresponsible capitalism of the type CP1 or the traditional market model(TM = aBc) shifted in 2012 towards green markets(GM = aBC), not red markets(RM = ABc); and therefore in old capitalist countries today we have a world of green markets(GM) or environmentally friendly economies or green economies. In other words, the partially responsible capitalism model(CP2) of today is green market based(GM).

c) Fully responsible capitalism(CP3)

Fully responsible capitalism[CP3 = f(FR)] is based on no externality assumptions and full inclusion. Its structure is reflected in Figure 5 below:

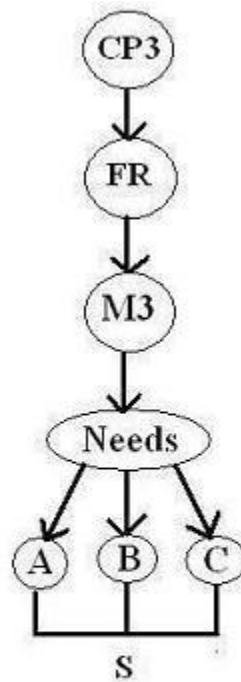


Figure 5 Fully responsible capitalism(CP3)
It has the structure of the sustainability market(S) as it is fully inclusive.

Figure 5 above helps us to indicate that there is only one type of fully responsible capitalism model(CP3), the sustainability market(S = ABC = ABC), which has no externality assumptions. The sustainability market(S) is fully inclusive and no externality based. Notice that in Figure 5 above all components are important endogenous issues so their impacts on other components are accounted for as there are no externality assumptions and there is full inclusion. And therefore, under sustainability markets(S) all externality costs created are accounted for and reflected in the pricing mechanism. Figure 5 above shows the future structure of capitalism as a fully responsible paradigm(FR).

Capitalism and the responsibility framework(RF)

If we put all the three development frameworks discussed above, fully irresponsible(FI), partially responsible(PR) and the fully responsible(FR) together we have the capitalism responsibility framework(CPRF) shared in Figure 6 below:

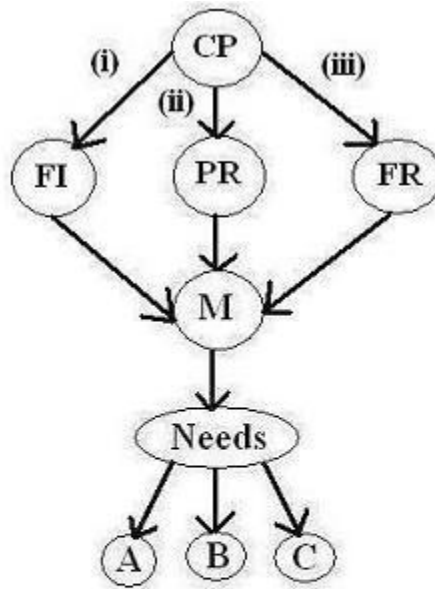


Figure 6 The responsibility framework of capitalism(CP)
The market M acts following the type of capitalism that it is followed, fully irresponsible(FI), partially responsible(PR), and fully responsible(FR) to meet needs.

Figure 6 helps us to see the following: a) that capitalism(CP) moves from left to right from less responsibility to more responsibility, changing its assumptions respectively; and b) that there are 3 different capitalism routes: The fully irresponsible route(FI) indicated by arrow (i); the partial responsibility route(PR) shown by arrow (ii); and the full responsibility route(FR) given by arrow (iii). Hence, the capitalism responsibility framework(CPRF) gives an idea of how different responsibility options placed in order in increasing responsibility are linked to social(A), economic(B) and environmental(C) needs and related externalities. Notice in Figure 6 that as we move from less responsibility to more responsibility we also move to less externality assumptions and to less exclusion; and it is clear that the final stop on this capitalism responsibility evolution road is full responsibility(FR) or sustainability markets(S).

Capitalism and the increasing responsibility framework(IRF)

When development paradigms no longer work they shift, a situation captured in the capitalism increasing responsibility framework(CPIRF) shared below in Figure 7:

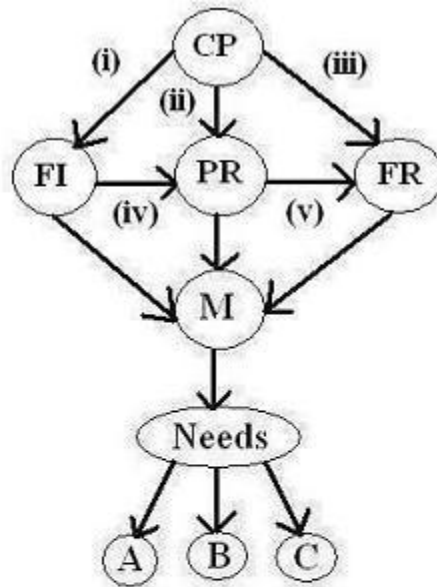


Figure 7 The increasing responsibility framework of capitalism(CP)

As paradigms shift they move towards states of higher responsibility to meet the needs. The shift from fully irresponsible models(FI) to partially responsible models(PR) is at point (iv); and the shift from partially responsible models(PR) to fully responsible modes(FR) is at point (v).

Figure 7 above let us highlight the following a) that when fully irresponsible capitalism models(FI) no longer work as business as usual they shift to partially responsible ones(PR) as indicated by arrow (iv); and b) that when partially responsible capitalism models(PR) no longer work as business as usual they shift to fully responsible ones(FR) as indicated by arrow (v). Moreover, Figure 7 helps us see that a) when paradigm shifts their level of responsibility increases; and b) that the last shift is towards full responsibility(FR). For example, when the traditional market(TM) was deemed environmentally unfriendly it shifted in 2012 to green markets(GM), an environment friendly model: a shift from fully irresponsible model to a partially responsible one.

Therefore, the capitalism increasing responsibility framework(CPIRF) gives an idea of how different paradigm shifts from less responsibility to more responsibility and how they are linked to social(A), economic(B) and environmental(C) needs and related externality assumptions. Notice in Figure 7 above that as we move from fully irresponsible positions(FI) to partially responsible ones(PR) we move towards partial externality assumptions and partial exclusion; and when we shift towards full responsibility(FR) we shifts towards no externality

assumptions and no exclusion; and it is clear that the final stop on this capitalism responsibility evolution road is full responsibility(FR) or sustainability markets(S). And therefore, fully responsible capitalism(FR) is capitalism under no externality assumptions and full inclusion as it then has the structure of a sustainability market(S).

The current capitalism increasing responsibility framework(CCPIRF)

Figure 7 above can be transformed and used to derive the current capitalism increasing responsibility framework by a) making FI = TM as the traditional market(TM) was the fully irresponsible capitalism market(FI); b) making PR = GM as the green market model(GM) is the current capitalism model and it is a partially responsible market(PR). As mentioned in the introduction in 2012 Rio +20 there was a formal paradigm shift from traditional market thinking(TM) to green market thinking(GM); and c) making FR = S as sustainability(S) is a fully responsible market(FR). And when doing this we get the structure of the current capitalism increasing responsibility framework(CCPIRF) as shown in Figure 8 below:

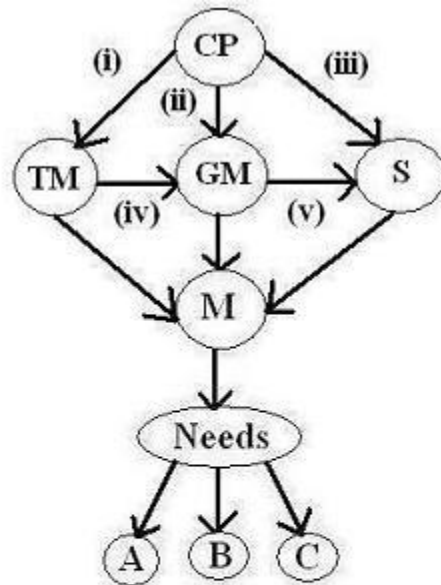


Figure 8 Capitalism under the current increasing responsibility framework
 The traditional market(TM) shifted to green markets(GM) in 2012 and the next shift will be towards sustainability markets(S).

Figure 8 above helps us to stress the following: a) that in 1776 Adam Smith could have chosen green capitalism(GM) indicated by route (ii), a partially responsible model or he could have chosen sustainability based markets(S) indicated by route (iii), a fully responsible model, as

the structure of the formal economy, but he chose traditional market thinking(TM) indicated by route (i), a fully irresponsible model; b) that when traditional market thinking(TM) no longer works it shifts towards green markets(GM) as indicated by arrow (iv), which is what happened in 2012 Rio + 20, here traditional market thinking no longer works; and c) that in the future when green market thinking(GM) no longer works it will shift towards sustainability thinking(S) as indicated by arrow (v), here both traditional market thinking and green market thinking no longer work.

The structure of the traditional market(TM)

Figure 8 above can be transformed and used to derive the actual structure of the traditional market(TM) as shown in Figure 9 below:

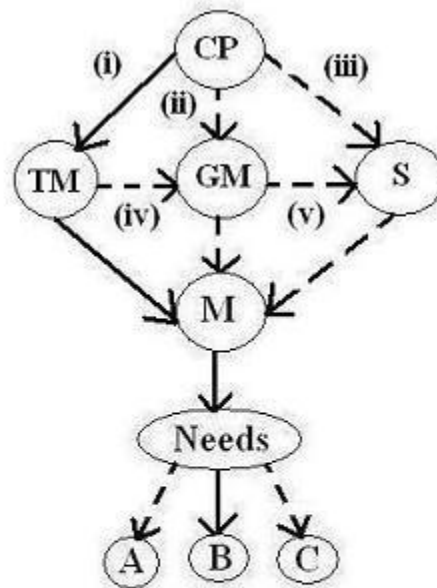


Figure 9 The structure of the traditional market(TM)
 It represents the fully irresponsible face of capitalism(CP) as only the economy(B) matters.

Figure 9 above shows simply that when capitalism(CP) follows the route (i) and takes the form of the traditional market(TM) as proposed by Adam Smith we have a fully irresponsible model as only the economy(B) matters as indicated by the continues arrow; and society(A) and the environment(C) are external factors to the traditional market model(TM), which is the reason why social and environmental costs created by the traditional market are not reflected in the pricing mechanism of the market.

The structure of the paradigm shift to green markets(GM)

Figure 8 above can be transformed and used to derive the actual structure of the 2012 paradigm shift from the traditional market(TM) to the green market(GM) as shown in Figure 10 below:

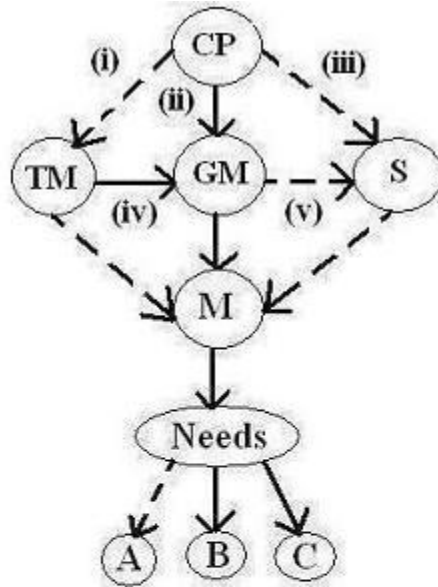


Figure 10 The structure of the paradigm shift from the traditional market(TM) to green markets(GM)
It reflects the paradigm shift from a fully irresponsible model(TM) to a partially responsible model(GM) as now the economy(B) is environmentally friendly(C) since both components matter at the same time.

Figure 10 above tells us simply that when the irresponsible capitalism route (i) or traditional market(TM) route no longer works it shift towards green markets(GM) as indicated by arrow (iv) and then it follows the partially responsible capitalism route (ii) as now both the economy(B) and the environment(C) matter as indicated by the continues arrows; and society(A) is now the only external factor to the green market model(GM), which is the reason why social costs created by the green market are not reflected in the pricing mechanism of the market. Based on Figure 10 above it can be said that green markets(GM) are environmentally friendly traditional markets.

The structure of the paradigm shift to sustainability markets(S)

Figure 8 above can also be transformed and used to derive the actual structure of the future paradigm shift from green market thinking(GM) to sustainability thinking(S) as shown in Figure 11 below:

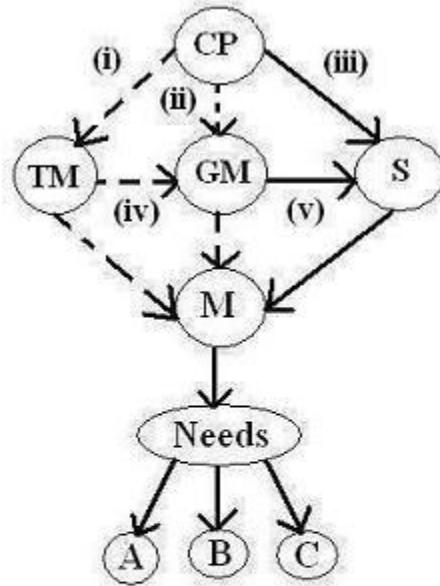


Figure 11 The future paradigm shift from green markets(GM) to sustainability markets(S) In the future green markets(GM) may need to close social sustainability gaps for capitalism to survive under sustainability markets(S).

Figure 11 above shows that when the partially responsible capitalism route (ii) or the green market(GM) route no longer works it shift towards sustainability markets(S) as indicated by arrow (v) and then it follows the fully responsible capitalism route (iii) as now all factors, the society(A), the economy(B), and the environment(C) matter as indicated by the continues arrows; there are no external factors in sustainability markets(S), which is the reason why social, economic and environmental costs created by the sustainability market are reflected in the pricing mechanism of the market. Based on Figure 11 above it can be said that sustainability markets(S) are socially and environmentally friendly traditional markets.

Food for thoughts

a) Did we choose the green capitalism path $TM \rightarrow GM \rightarrow S$ over the red capitalism path $TM \rightarrow RM \rightarrow S$ in 2012 partly because there is a capitalism bias towards being socially friendly? I think yes, what do you think?

b) The science based capitalism path to first correct Adam Smith's model to make it environmentally friendly is $TM \rightarrow GM \rightarrow S$, is it then right to use dwarf green market paths(DGM) to deal with the environmental crisis as is being done today($TM \rightarrow DGM \rightarrow S$)? I think no, what do you think?

c) Can the capitalism responsibility framework and increasing responsibility framework be expressed in terms of market prices? I think yes, what do you think?

Specific conclusions

First, the structure of fully irresponsible, of partially responsible, and of fully responsible capitalism and their main implications were indicated. Second, it was pointed out that organizing them in one framework leads to the capitalism responsibility framework. Third, it was shown that when the notion of paradigm shift is introduced then the capitalism responsibility framework is transform in the capitalism increasing responsibility framework, which highlights that the last stop in this capitalism responsibility evolution road is full responsibility based capitalism or sustainability markets. And fourth, the current capitalism increasing responsibility framework was shared and used to derive the structure of the traditional market, the structure of the paradigm shift to green markets, and structure of the paradigm shift to sustainability markets.

General conclusions

It was stressed that the capitalism responsibility framework shared can be useful to organize different responsibility structures in a way that gives us a sense of increasing capitalism responsibility. It was highlighted that the capitalism increasing responsibility framework can be used to capture the shifting path that specific capitalism paradigms should be expected to follow when specific externality assumptions no longer work and need to shift. Based on the structure of the capitalism responsibility framework and of the capitalism increasing responsibility framework it was indicated that sustainability markets or full responsibility markets are the last stop in the capitalism responsibility evolution road. And finally, it was shown that transforming the capitalism increasing responsibility framework into the current capitalism increasing responsibility framework help us to see current and future paradigm shift paths as well as to derived the structure of specific paradigms and of specific paradigm shifts.

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