Sustainability thought 167: How to link market structure-population dynamics-system stability framework theory to traditional market thinking under externality neutrality assumptions and under no externality neutrality assumptions?

By

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Abstract

The general market structure-population dynamics-system stability framework tells us that the nature of the market price determines the nature of the impact on system stability that consumption and production dynamics and population dynamics can have, via no overshoot or via overshoot. As the nature of the market price can be positive or negative in terms of system stability impacts depending on whether or not all cost associated with the business activity are reflected in the pricing mechanism, then positive impacts can be associated with full optimal market pricing where all cost associated with economic activity are accounted for, and negative impacts can be linked to distorted market pricing as not all cost associated with business activity are accounted for as some costs are assumed away or are assumed irrelevant. And hence, the most distorted market price possible would lead to the most distorted consumption, production, and population dynamics affecting system stability negatively at the extreme. In other words, optimal market pricing leads to positive system stability impacts dynamics in terms of consumption and production dynamics and population dynamics while distorted market pricing encourage negative system stability impacts in terms of production and consumption dynamics and population dynamics. It is well-known that the traditional market under externality neutrality assumptions operates under optimal market pricing as social and environmental cost associated to production are left out the pricing mechanism of the market leading to optimal market structure dynamics and optimal system stability impacts; and that under no externality assumptions they operate under distorted market pricing promoting distorted market structure dynamics and system stability impacts. In other words, the traditional market thinking is optimal by assumption, but it is distorted in practice; and hence the traditional market by assumption leads to optimal system stability impacts, but in practice it take us toward distorted system stability impacts. And this raises relevant questions like How to link market structure-population dynamics-system stability framework theory to traditional market thinking under externality neutrality assumptions and under no externality neutrality assumptions? What are the main

implications of doing this? Among the goals of this paper is to provide answers to the questions listed above.

Key words

Market structure, market price, production, consumption, population dynamics, overshoot, no overshoot, system stability, climate change, responsible behavior, irresponsible behavior, optimal market price, distorted market price, optimal consumption, distorted consumption, optimal production, distorted production, optimal population, distorted population, optimal system stability impact, distorted system stability impact

Introduction

a) The general M-T-R system stability framework

A general market structure-population dynamics and system stability framework(M-T-R framework) has been shared just recently as systematic way to look at system stability issues like global warming or environmental problems(Muñoz 2022), as shown in Figure 1 below:

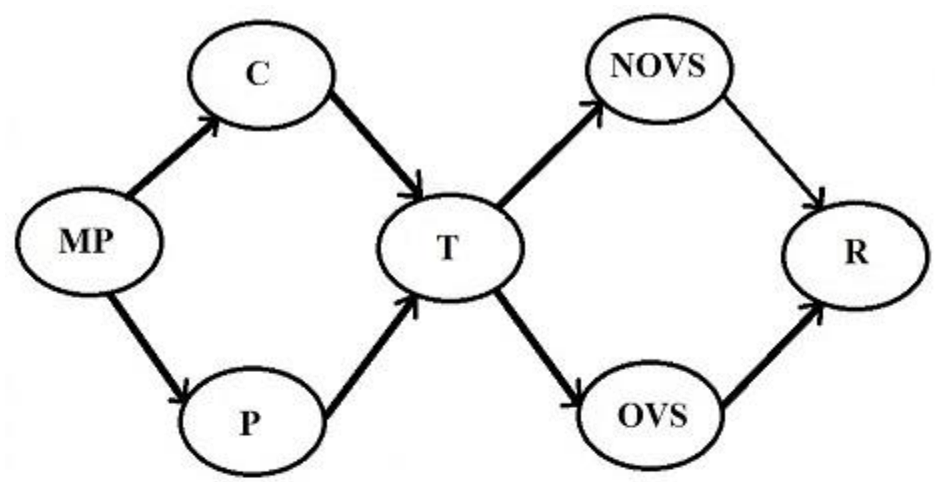

Figure 1 The general market structure, population dynamics, and system stability framework (M-T-R framework)

The following aspects can be highlighted based on Figure 1 above about the general system stability framework: i) market pricing(MP) is the root cause of impacts on system stability R, be it they positive or negative; ii) The nature of population dynamics(T) is the consequence of the nature of market price dynamics; iii) overshooting behavior(OVS) is associated only with irresponsible population behavior driven by irresponsible market structure dynamics; and iv) No overshooting behavior(NOVS) is linked to responsible population behavior led by responsible market structure dynamics. Hence the M-T-R framework works via a positive or negative loop depending on whether or not the market price is a responsible market price or an irresponsible one.

Expectation 1:

The nature of the market price determines the nature of the impact on system stability R as it shapes the nature of consumption, production, population dynamics and the overshooting behavior via a positive loop or a negative loop.

b) The OM-OT-OR system stability framework

If the market price(MP) in Figure 1 above happens to be the optimal market price(OMP) so that MP = OMP, then it will feed a positive loop systematically across the framework leading to optimal stability impact(OR), as summarized in Figure 2 below:

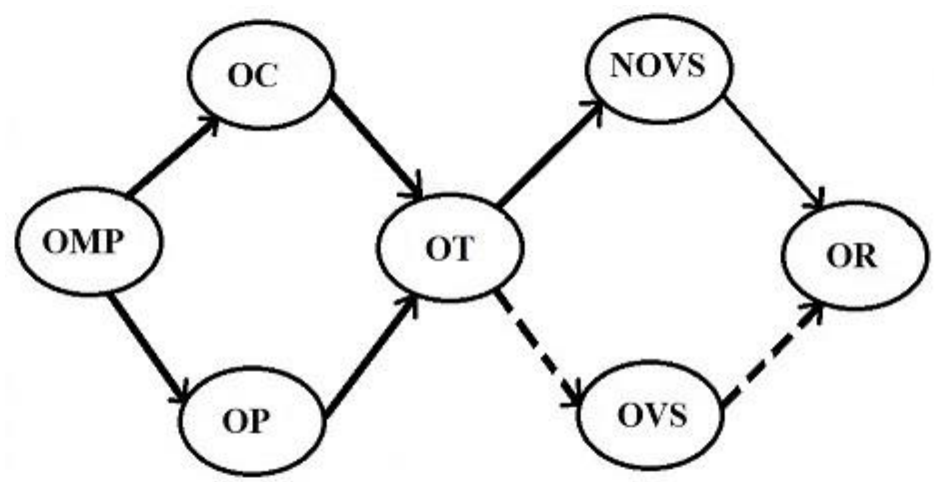

Figure 2 The optimal market structure, the optimal population dynamics, and the optimal system stability framework(OM-OT-OR framework)

The following aspects can be pointed out based on Figure 2 above about the OM-OT-OR system stability framework: i) Optimal market pricing(OMP) is the root cause of the optimal impacts on system stability OR; ii) Optimal market pricing(OMP) leads to optimal consumption(OC) and optimal production(OP); iii) The optimal nature of population dynamics(OT) is the consequence of the optimal nature of market price dynamics; iv) No overshooting behavior(NOVS) is linked to optimal population behavior led by optimal market structure dynamics. Hence the OM-OT-OR framework works via a positive loop as the optimal market price is a responsible market price as it accounts for all cost associated with the business activity.

Expectation 2:

The optimal nature of the market price determines the optimal nature of the impact on system stability OR as it shapes the optimal nature of consumption, production, population dynamics and the no overshooting behavior via a positive loop.

c) The DM-DT-DR system stability framework

If the market price(MP) in Figure 1 above happens to be a distorted market price(DMP) so that MP = DMP, then it will feed a negative loop systematically across the framework leading to distorted stability impact(DR), as indicated in Figure 3 below:

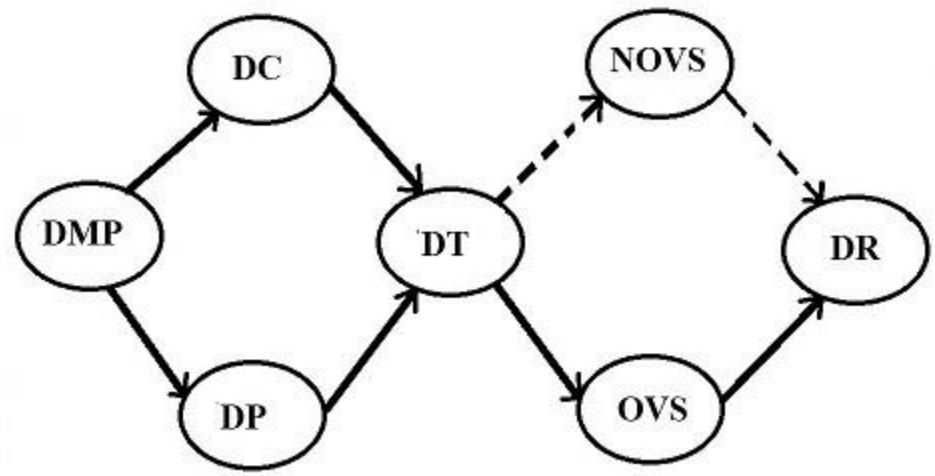

Figure 3 **The distorted market structure-distorted population dynamics-distorted system stability framework(DM-DT-DR framework)**

The following aspects can be shared based on Figure 3 above about the DM-DT-DR system stability framework: i) Distorted market pricing(DMP) is the root cause of the distorted impacts on system stability DR; ii) Distorted market pricing(DMP) leads to distorted consumption(DC) and distorted production(DP); iii) The distorted nature of population dynamics(DT) is the consequence of the distorted nature of market price dynamics; iv) Overshooting behavior(OVS) is linked to distorted population behavior led by distorted market structure dynamics. Hence the DM-DT-DR framework works via a negative loop as the distorted market price is an responsible market price as it does not accounts for all cost associated with the business activity, but the population dynamic distortions and system stability distortions created here are not yet severe enough to be easily seen as population problems and system stability problems, a short term to medium term aspect associated with distorted market pricing in the initial stages of market expansion.

Expectation 3:

The distorted nature of the market price determines the distorted nature of the impact on system stability R as it shapes the distorted nature of consumption, production, population dynamics and the overshooting behavior via a negative loop.

d) The MDM-MDT-MDR system stability framework

If the market price(MP) in Figure 1 above happens to be the most distorted market price(MDMP) so that MP = MDMP, then it will feed a negative loop systematically across the framework leading to the most distorted stability impact(MDR), as shown in Figure 4 below:

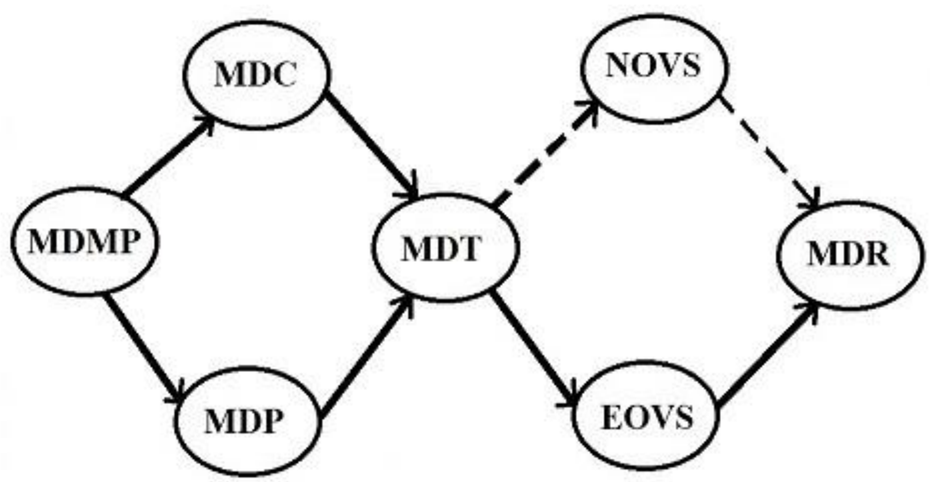

Figure 4 The most distorted market structure-the most distorted population dynamics and the most distorted system stability framework(MDM-MDT-MDR framework)

The following aspects can be highlighted based on Figure 4 above about the MDM-MDT-MDR system stability framework: i) Most distorted market pricing(MDMP) is the root cause of the most distorted impacts on system stability MDR; ii) Most distorted market pricing(MDMP) leads to most distorted consumption(MDC) and most distorted production(MDP); iii) The most distorted nature of population dynamics(MDT) is the consequence of the most distorted nature of market price dynamics; iv) Extreme overshooting behavior(EOVS) is linked to the most distorted population behavior led by most distorted market structure dynamics. Hence the MDM-MDT-MDR framework works via a negative loop as the most distorted market price is an responsible market price as it does not accounts for all cost associated with the business activity, but the population dynamic distortions and system stability distortions created here are so severe to be easily seen as population problems and system stability problems, a long term aspect associated with distorted market pricing in the advanced stages of market expansion.

Expectation 4:

The most distorted nature of the market price determines the most distorted nature of the impact on system stability R as it shapes the most distorted nature of consumption, production, population dynamics and the extreme overshooting behavior via a very negative loop.

e) The MDM-OVT-EP system stability framework

If the market price(MP) in Figure 1 above happens to be the most distorted market price(MDMP) so that MP = MDMP and since in the long term we can say that i) its most distorted consumption is over consumption so that MDC = OVC; ii) its most distorted production is over production so that MDP = OVP; iii) its most distorted population dynamics is over population so that MDT = OVT; and iv) its most distorted system stability is an environmental problem so that MDR = EP, then we can link the long term consequences of the most distorted market pricing to the environmental problem as indicated in Figure 5 below:

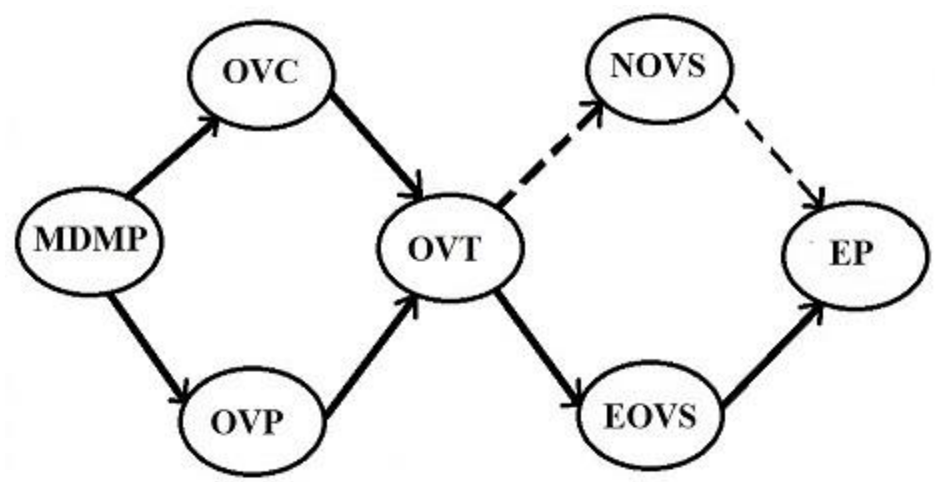

Figure 5 The most distorted market structure, over population dynamics and environmental problems framework(The MDM-OVT-EP framework)

The following aspects can be listed based on Figure 5 above about the MDM-OVT-EP system stability framework: i) Most distorted market pricing(MDMP) is the root cause of environmental problems EP; ii) Most distorted market pricing(MDMP) leads to over consumption(OVC) and over production(OVP); iii) Over population dynamics is the consequence of the most distorted nature of market price dynamics; iv) Extreme overshooting behavior(EOVS) is linked to overpopulation behavior led by the most distorted market structure dynamics. Therefore, the MDM-OVT-EP framework works via a negative loop as the most distorted market price is an responsible market price as it does not accounts for all cost associated with the business activity, but the population dynamic distortions and system stability distortions created here are so severe to be easily seen as over population problems and environmental problems, again a long term aspect associated with distorted market pricing in the advanced stages of market expansion.

Expectation 5:

The most distorted nature of the market price determines the most distorted nature of the impact on environmental problems as it leads to over consumption, over production, over population dynamics and to extreme overshooting behavior via a very negative loop.

f) Traditional market thinking in theory and in practice and in consequences

We know that the traditional market operates under externality neutrality assumptions that make its price, its supply and its demand optimal. Under externality neutrality assumptions the only cost associated with business activity is the economic cost, no matter how much the economy expand and at what levels, the price, its supply and its demand remain optimal: That is the theory. The illusion that there can be economic growth without producing externalities as been recently pointed out analytically and graphically(Muñoz 2020a) Under no externality neutrality assumption, on the other hand, the traditional market price is a distorted market price as it does not reflect both the social and environmental costs associated with the business activity. Under no externality neutrality assumptions as only the economic cost of production are accounted for and the other costs are externalized as economic expansion takes place and times passes the traditional market become even most distorted as at the end of the race to produce at the lowest cost possible it becomes the most distorted market price possible: The is the practice. The idea that as cost externalization expands price irresponsibility expands too has been highlighted recently(Muñoz 2020b) leading to more distorted market prices. At the beginning stages of economic expansion the population impacts and the social and environmental problem impacts are hardly noticeable or it can be hidden or dismissed. At the advance stages of economic expansion the population impacts and social and environmental problems impacts like poverty and pollution can be easily seen or they cannot be hidden or dismissed.

As the traditional market price thinking from 1776 when Adam Smith shared his perfect market theory(Smith 1776) to 1987 was supposed to be optimal it was supposed to lead to optimal population dynamics and optimal impacts on system stability, but instead it lead to extreme social problems(e.g., poverty, over population) and environmental problems(e.g. pollution, environmental degradation), facts that led the Brundtland commission in 1987(WCED 1987) to conclude that the traditional business as usual model was not working and we needed to go beyond it, unleashing a wide range of sustainable development models from 1987 to 2012, until agreement was reached at the RIO +20 Conference(UNCSD 2012a; UNCSD 2012b) that the way to go was green, in terms of markets, growth and economy so as to be able to fix the environmental externality problem associated with the traditional economic model pointed out by the Brundtland Commission in 1987. In other words, from 1776 to now the traditional market price has been a distorted market price(Muñoz 2010) as it has only accounted for the economic costs of production under externality neutrality assumptions.

g) The need to link the system stability framework theory with optimal traditional market pricing and distorted traditional market pricing theory

The discussion above suggests that there is a need for a systematic understanding on how optimal traditional market pricing and distorted traditional market pricing would have been expected to affect system stability in theory and in practice as the nature of pricing shapes the nature of population dynamics and of system problems. And this raises relevant questions like how to link market structure-population dynamics-system stability framework theory to traditional market thinking under externality neutrality assumptions and under no externality neutrality assumptions? What are the main implications of doing this? Among the goals of this paper is to provide answers to the questions listed above.

Goals of this paper

a) To share the structure of the system stability framework when the traditional market is an optimal price and list the implications of this; b) To point out the structure of the system stability framework when the traditional market price is a distorted market price and stress the implications of this; c) To highlight the structure of the system stability framework when the traditional market price is the most distorted market price possible and provide the implications of this; and d) To link the most distorted traditional market price idea to over population dynamics and environmental problems and indicate the implications of this.

Methodology

First, the terminology, some operational concepts and merging rules are shared. Second, the structure of the system stability framework when the traditional market is an optimal price and its implications are shared. Third, the structure of the system stability framework when the traditional market price is a distorted market price and its implications are stressed. Fourth, the structure of the system stability framework when the traditional market price is the most distorted market price possible and its implications are pointed out. Fifth, the most distorted traditional market price idea is linked to over population dynamics and environmental problems and the implications of this are given. And finally, some food for thoughts and relevant conclusions are provided.

Terminology

M = Market structure dynamics	T = Population dynamics
R = System stability	MP = Market price
C = Consumption	P = Production
OVS = Overshoot	NOVS = No overshoot
A = Dominant / active component	a = Dominated / passive component
M-R framework	T-R framework
M-T-R framework	TM = Traditional market price
OMP = Optimal market price	DMP = Distorted market price
MDMP = Worse distorted market price	OC = Optimal consumption
MDC = Most distorted consumption	OP = Optimal production
DP = Distorted production	MDP = Most distorted production
OT = Optimal population dynamics	DT = Distorted population dynamics
MDT = Most distorted population dynamics	OR = Optimal system stability
DR = Distorted system stability	MDR = most distorted system stability
EP = Environmental problems	OVC = Overconsumption
OVP = Over production	OVT = Over population
OM-OT-OR framework	DM-DT-DR framework
DC = Distorted consumption	MDM-MDT-MDR framework
OVT-EP = Overpopulation and environmental problems framework	
DM = Distorted market	DTM = Distorted traditional market
OM = Optimal market	OTM = Optimal traditional market
DTMP = Distorted traditional market price	MDTMP = Most distorted traditional market price
MDTM = Most distorted traditional market	OTMP = Optimal traditional market price

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Operational concepts and merging rules

<u>i) Operational concepts</u>

1) Responsible market price, a *price that reflects all the cost of production*

2) Irresponsible market price, *a price that does not reflect all the cost of production*

3) Responsible population behavior, *one that lives under the carrying capacity of the system so it does not overshoot*

4) Irresponsible population behavior, *one that goes over the carrying capacity of the system so it overshoots.*

5) Responsible production, *the one driven by a responsible market price*

6) Irresponsible production, *the one led by an irresponsible market price*

7) Responsible consumption, *the one driven by a responsible market price*

8) Irresponsible consumption, *the one led by an irresponsible market price*

9) Right market price, *a responsible market price*

10) Distorted market price, *an irresponsible market price*

11) Wrong market price, *a distorted market price*

12) Right production, *a responsible production level*

13) Wrong production, *an irresponsible production level*

14) Right consumption, *a responsible consumption level*

15) Wrong consumption, *an irresponsible consumption level*

16) Right population, *a responsible population*

17) Wrong population, *an irresponsible population*

18) Right system stability impact, *a responsible stability impact*

19) Wrong system stability impact, *an irresponsible stability impact*

20) Optimal price, *a right market price*

21) Non-optimal market price, *a wrong market price*

22)Best market price, *an optimal market price*

23)Worse market price, *the worse wrong market price*

24) Most distorted market price, *the most irresponsible market price*

25) Optimal consumption, *the right consumption level*

26) Distorted consumption, *the wrong consumption level*

27) Most distorted consumption, *the worse consumption level*

28) Optimal production, *the right production level*

29) Distorted production, *the wrong production level*

30) Most distorted production, *the worse production level*

31) Optimal population, *the right population level*

32) Distorted population, *the wrong population level*

33) Most distorted population, *the worse population level*

34) Optimal system stability impact, *the most responsible system stability impact*

35) Distorted system stability impact, *an irresponsible system stability impact*

36) Most distorted system stability, *the most irresponsible system stability impact*

ii) Merging rules

a) The case of frameworks

Let's assume we have a stability system with 4 components A, B. C and D and 4 different frameworks: F1 = A-D, F2 = B-D, F3 = C-D, and F4 = A-B-D, where D is the stability issue and the other components are the root causes and/or consequences, then the following merging rules hold:

1) F1-F2 = (A-D)(B-D) = A-B-D as DD = D

2) F1-F3 = (A-D)(C-D) = A-C-D as DD = D

3) F2-F3 = (B-D)(C-D) = B-C-D as DD = D

4) F1.F4 = (A-D)(A-B-D) = A-B-D as AA = A and DD = D

5) F2-F4 = (B-D)(A-B-D) = A-B-D as BB = B and DD = D

6) F3.F4 = (C-D)(A-B-D) = A-B-C-D since DD = D

b) The case of dominant component based systems

Let's assume we have a development model with 3 components A, B. and C; and we have 4 possible dominant component based models: M1 = A, M2 = B, M3 = C, and M4 = BC, then the following merging rules hold:

1) M1.M2 = (A)(B) = AB

2) M1.M3 = (A)(C) = AC

3) M1.M4 = (A)(BC) = ABC

4) M2.M3 = (B)(C) = BC

5) M2.M4 = (B)(BC) = BC

c) The case of dominant and dominated component based systems

Let's assume we have a development model with 3 components A, B. and C; and we have 4 possible dominant and dominated components based models: M1 = Abc, M2 = aBc, M3 = abC, and M4 = aBC, then the following merging rules hold:

1) M1.M2 = (Abc)(aBc) = ABc

2) M1.M3 = (Abc)(abC) = AbC

3) M1.M4 = (Abc)(aBC) = ABC

4) M2.M3 = (aBc)(abC) = aBC

5) M2.M4 = (aBb)(aBC) = aBC

Linking the OM-OT-OR optimal framework theory to the pricing in traditional markets under externality neutrality assumptions

In the traditional market thinking as indicated in the introduction we know that at the point that supply and demand meet the traditional market price is optimal; and hence consumption and production is optimal, and this is possible because of the embedded externality neutrality assumption in that market, which make it possible to produce and consume without producing externalities. Hence, under externality neutrality assumptions the traditional market price(TMP) is an optimal market price(OMP) so that OTMP = OMP.

If the market price(MP) in Figure 1 above happens to be the optimal market price(OMP) so that MP = OMP = OTMP, then the optimal traditional market price(OTMP) will feed a positive loop systematically across the framework leading to optimal stability impacts(OR) in similar fashion as OMP does in Figure 2 above. In other words, if we make OMP = OTMP in Figure 2 above it leads to the structure indicated in Figure 6 below:

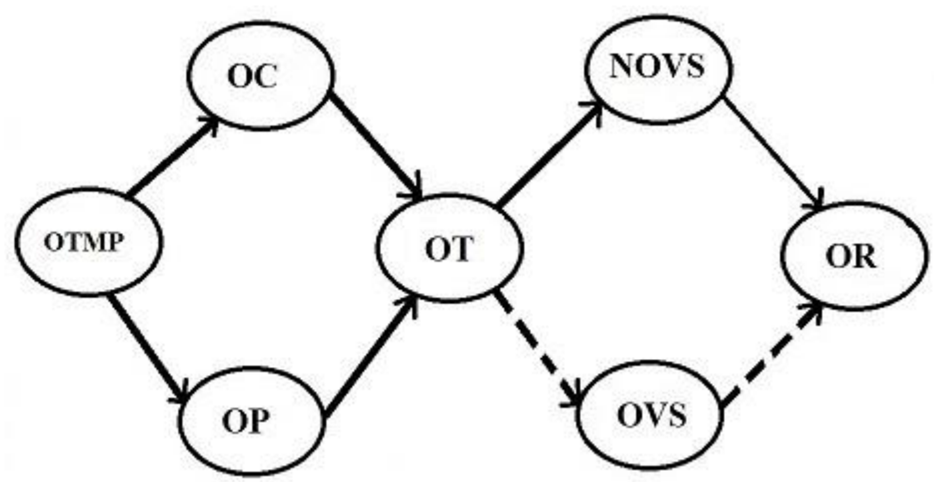

Figure 6 The optimal traditional market structure, optimal population dynamics and optimal system stability framework(OTM-OT-OR framework)

The following aspects can be pointed out based on Figure 6 above about the OTM-OT-OR system stability framework: i) Optimal traditional market pricing(OTMP) is the root cause of the optimal impacts on system stability OR; ii) Optimal traditional market pricing(OMP) leads to optimal consumption(OC) and optimal production(OP); iii) The optimal nature of population dynamics(OT) is the consequence of the optimal nature of traditional market price dynamics; iv) No overshooting behavior(NOVS) is linked to optimal population behavior led by optimal traditional market structure dynamics. Hence the OTM-OT-OR framework works via a positive loop as the optimal traditional market price is a responsible market price under externality neutrality assumptions. In other words, under externality neutrality assumptions the optimal traditional market price is assumed to accounts for all economic cost associated with the business activity as externality costs are assumed to be zero or negligible then.

Expectation 6:

The optimal nature of the traditional market price determines the optimal nature of the impact on system stability OR as it shapes the optimal nature of traditional consumption, traditional production, population dynamics and the no overshooting behavior via a positive loop.

Linking the DM-DT-DR distorted framework theory to the pricing in traditional markets under no externality neutrality assumptions in the short term

As indicated in the introduction, under no externality neutrality assumptions the traditional market pricing mechanism is distorted(DTMP) as it does not reflect the externality costs associated with business activity and expansion, but in the short term these distortions are small as externalities associated with initial business activity and-expansion are small. In other words, in the short term the traditional market price(TMP) is a distorted market price(DMP) so that TMP = DMP = DTMP.

If the market price(MP) in Figure 1 above happens to be a distorted market price(DMP) so that MP = DMP = DTMP, then the distorted traditional market price(DTMP) will feed a negative loop systematically across the framework leading to distorted stability impacts(DR) in similar fashion as DMP does in Figure 3 above. In other words, if we make DMP = DTMP in Figure 3 above it takes us to the structure indicated in Figure 7 below:

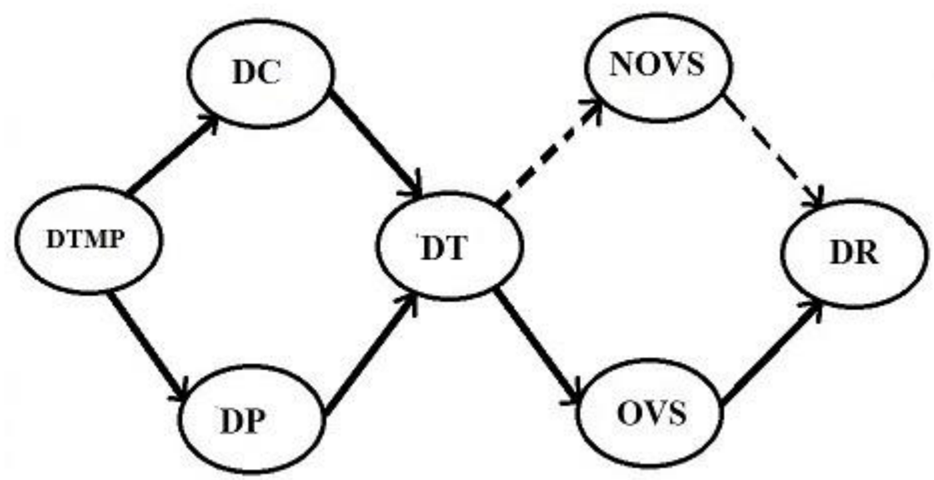

Figure 7 The distorted traditional market structure-distorted population dynamics-distorted system stability framework(DTM-DT-DR framework)

The following aspects can be indicated based on Figure 7 above about the DTM-DT-DR system stability framework: i) Distorted traditional market pricing(DTMP) is the root cause of the distorted impacts on system stability DR; ii) Distorted traditional market pricing(DTMP) leads to distorted traditional consumption(DC) and distorted traditional production(DP); iii) The distorted nature of population dynamics(DT) is the consequence of the distorted nature of the traditional market price dynamics; iv) Overshooting behavior(OVS) is linked to distorted population behavior led by distorted traditional market structure dynamics. Hence the DTM-DT-DR framework works via a negative loop as the distorted traditional market price is an irresponsible market price as it does not accounts for all cost associated with the business activity, but the population dynamic distortions and system stability distortions created here by traditional market pricing are not yet severe enough to be easily seen as population problems and system stability problems, a short term to medium term situation associated with distorted market pricing in the initial stages of market activity and expansion.

Expectation 7:

The distorted nature of the traditional market price determines the distorted nature of the impact on system stability DR as it shapes the distorted nature of traditional consumption, traditional production, population dynamics and the overshooting behavior via a negative loop.

Linking the MDM-MDT-MDR most distorted theory to the pricing in traditional markets under no externality neutrality assumptions in the long term

Again as indicated in the introduction, under no externality neutrality assumptions the traditional market pricing mechanism is distorted(DTMP) as it does not reflect the externality costs associated with business activity and expansion, but in the long term these distortions are increasingly more severe as externalities associated with long term business activity and-expansion are accumulating increasing the size of the distortion as markets tend towards producing at the lowest cost possible. In other words, in the long term, the traditional market price(TMP) tends towards the most distorted market price(MDMP) so that TMP = MDMP = MDTMP.

If the market price(MP) in Figure 1 above happens to be the most distorted market price(MDMP) so that MP = MDMP = MDTMP, then the most distorted traditional market price(MDTMP) will feed a very negative loop systematically across the framework leading to most distorted stability impacts(MDR) in similar fashion as MDMP does in Figure 4 above. In other words, if we make MDMP = MDTMP in Figure 4 above it takes us to the structure shown in Figure 8 below:

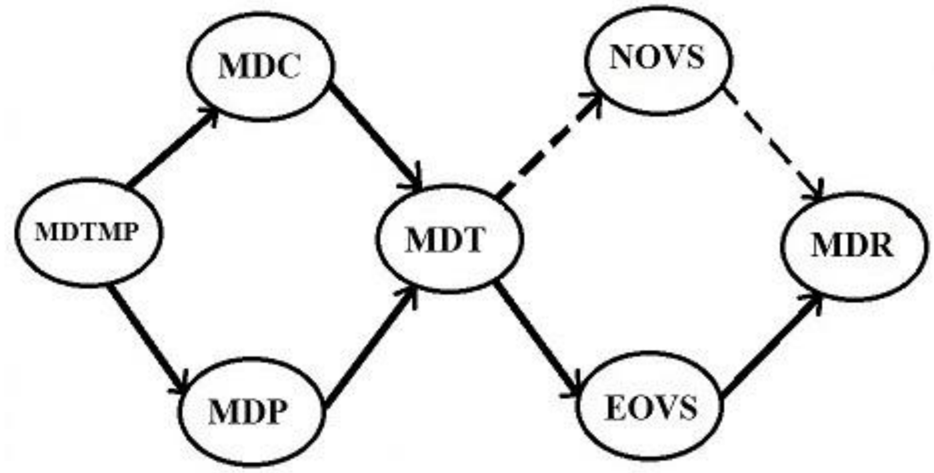

Figure 8 The most distorted traditional market structure-the most distorted population dynamics and the most distorted system stability framework(MDTM-MDT-MDR framework)

The following aspects can be stressed based on Figure 8 above about the MDTM-MDT-MDR system stability framework: i) Most distorted traditional market pricing(MDTMP) is the root cause of the most distorted impacts on system stability MDR; ii) Most distorted traditional market pricing(MDTMP) leads to most distorted traditional consumption(MDC) and most distorted traditional production(MDP); iii) The most distorted nature of population dynamics(MDT) is the consequence of the most distorted nature of traditional market price dynamics; iv) Extreme overshooting behavior(EOVS) is linked to the most distorted population behavior led by most distorted traditional market structure dynamics. Hence the MDTM-MDT-MDR framework works via a very negative loop as the most distorted traditional market price is a very responsible market price as it does not accounts for all cost associated with the business activity as more externality costs are externalized, so now the population dynamic distortions and system stability distortions created here are so severe to be easily seen or taken as population problems and system stability problems, a long term aspect associated with distorted market pricing in the advanced stages of market expansion.

Expectation 8:

The most distorted nature of the traditional market price determines the most distorted nature of the impact on system stability MDR as it shapes the most distorted nature of traditional consumption, traditional production, population dynamics and the extreme overshooting behavior via a very negative loop.

Linking the MDM-OVT-EP most distorted theory to the pricing in traditional markets under no externality neutrality assumptions in the long term

Just of most distorted market pricing(MDMP) is expected to do the most distorted traditional market price(MDTMP) in the long term will lead to over consumption(OVC), over production(OVP), over population dynamics(OVT), extreme overshooting(EOVS), and environmental problems(EP).

Hence if the market price(MP) in Figure 1 above happens to be the most distorted market price(MDMP) so that MP = MDMP = MDTMP, then the most distorted traditional market price(MDTMP) will feed a very negative loop systematically across the framework leading to environmental problems(EP) in similar fashion as MDMP does in Figure 5 above. In other words, if we make MDMP = MDTMP in Figure 5 above it takes us to the structure given in Figure 9 below:

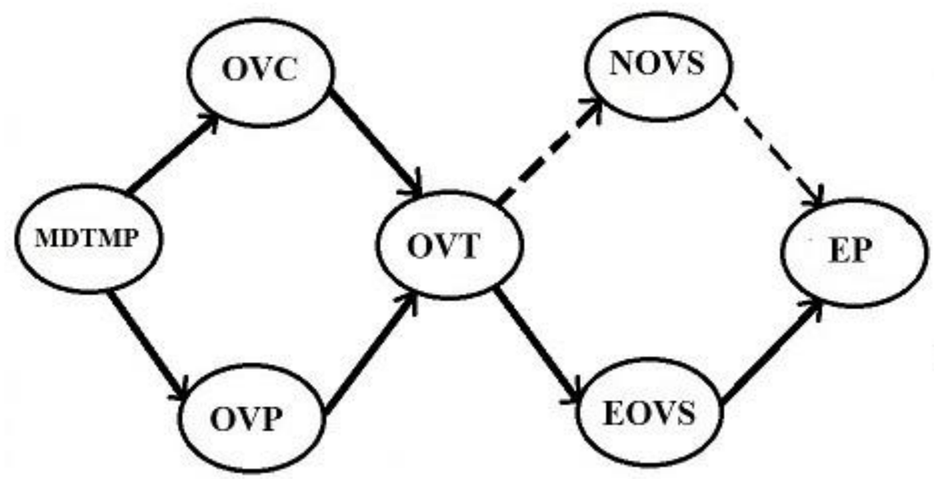

Figure 9 The most distorted traditional market structure, over population dynamics and environmental problems framework(The MDTM-OVT-EP framework)

The following aspects can be highlighted based on Figure 9 above about the MDTM-OVT-EP system stability framework: i) Most distorted traditional market pricing(MDTMP) is the root cause of environmental problems EP; ii) Most distorted traditional market pricing(MDTMP) leads to over consumption(OVC) and over production(OVP); iii) Over population dynamics is the consequence of the most distorted nature of traditional market price dynamics; iv) Extreme overshooting behavior(EOVS) is linked to overpopulation behavior led by the most distorted traditional market structure dynamics. Therefore, the MDTM-OVT-EP framework works via a very negative loop as the most distorted traditional market price is a very responsible market price as it does not accounts for all cost associated with the business activity as cost externalization increases, but the population dynamic distortions and system stability distortions created here are so sever to be easily seen and understood as over population problems and environmental problems, again a long term aspect that goes one to one with distorted market pricing in the advanced stages of market expansion.

Expectation 9:

The most distorted nature of the traditional market price determines the most distorted nature of the impact on environmental problems as it leads to over consumption, over production, over population dynamics and to extreme overshooting behavior via a very negative loop.

General implications

1) The traditional market price a la Adam Smith is an optimal market price by assumption only as cost externalization is real as shown by the social and environmental problems that came along in the long term since 1776 due to this externality neutrality assumption allowing to leave externality costs outside the pricing mechanism even after they increased with economic expansion; 2) Under no externality neutrality assumptions, in the long term as the race to produce at the lowest cost possible increases with economic expansion we should expect over population dynamics and environmental problems to come along; 3) It is distorted market prices the ones that lead to system stability problems like environmental problems as optimal market prices lead to optimal system stability dynamics; 4) Hence, the theory of optimality attached to traditional market thinking did not match the practice as in the long term as such assumption led to current environmental problems; 5) Then, to solve system stability problems like environmental problems requires a systematic solution that starts with correcting distorted traditional market pricing to shift them to optimal pricing, and shifting them when do it so to green markets as we are internalizing fully the environmental costs of production, correction that will transform the market structure, the population dynamic structure, the overshooting structure, and the system stability structure.

Food for thoughts

a) Should we expect overshooting under distorted traditional market pricing? I think yes, what do you think?; b) Should we expect no overshooting behavior under optimal traditional market pricing? I think Yes, what do you think?; and c) Can a system stability issue be solved without fixing distorted traditional market prices? I think No, what do you think?

Conclusions

First, it was stressed that under externality neutrality assumptions the traditional market price is an optimal market price, that feeds a positive system stability look leading to optimal traditional consumption, optimal traditional production, optimal population dynamics, and to optimal system stability as there is no overshooting behavior. Second, it was highlighted that in the short term under no externality neutrality assumptions we should expect traditional markets to be distorted, feeding distortions systematically across traditional consumption, traditional production, population dynamics, overshooting behavior and system stability impacts. Third, it was pointed out that in the long term under no externality neutrality assumptions we should expect traditional market price distortions to tend towards the most distorted traditional market price as we move towards producing at the lowest cost possible and higher cost externalization point possible, feeding over production, over consumption, over population and extreme overshooting behavior creating environmental problems. And fourth, it was mentioned that if we really want to solve environmental problems the systematic polity response to go from distorted market prices to optimal market prices starts with correcting the distorted traditional market price to account for the environmental externality cost associated with production to shift it to green markets. As fixing the root cause of environmental problems should be expected to have a positive system stability impact across the M-T-R framework.

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