

**Short Elucidating Note 113: How can the golden paradigm-flawed paradigm sustainability based framework be used to provide an overview of the expected government monitoring and support role in world driven by responsible and irresponsible market behavior under pollution production neutrality and no neutrality assumptions?**

By

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**Abstract**

There is a pollution production problem separating flawed paradigms from golden paradigms. Each paradigm has its anchored point, a contraction point and an expansion point, and at each point the government has a specific role to play as a market promoter, as a market monitor, as a market regulator, and as market policy enforcer under no conflict of interest as the responsibility of proper market functioning and of market failures falls on golden paradigm producers and golden paradigm consumers, and on flawed paradigm producers and flawed paradigm consumers, respectively. Beside linking market behavior with specific expected government roles the framework above can also be used to highlight that government actions can have positive and negative impacts directly or indirectly on the responsible and irresponsible behavior of markets they are encouraging or discouraging whether governments are acting under paradigm shift knowledge gaps or not plus the framework can be also used to differentiate between two possible types of market failures, internal and external market failures, and hint to the specific role expected government responsibility plays in each of those cases. The issues discussed above, some of them are usually seen from the traditional market thinking/theory point of view while others are missing in mainstream economic thinking as they are assumed away under pollution production neutrality assumptions or they are ignored knowingly as the focus suddenly becomes to address resource use efficiency problems instead pollution production problems. However, all of these issues mentioned above are captured in simple terms using golden paradigm-flawed paradigm sustainability theory and thinking to come out with general ways to see the expected government role and the impacts of such a role on market dynamics and pollution production dynamics in different scenarios, golden or flawed, under pollution neutrality assumptions or not. And this makes the following questions relevant: How can the golden paradigm-flawed paradigm sustainability based framework be used to provide an overview of expected government monitoring and support role in world driven by responsible and irresponsible market behavior under pollution production neutrality and no neutrality assumptions? What are the implications of framing the issue as done here for traditional market thinking and vertical flawed paradigm evolution thinking?

## Key concepts

Golden paradigm, flawed paradigm, pollution production problem, sustainability, market expansion, market contraction, government intervention/action, flawed paradigm sustainability problem, internal market failure, external market failure, pollution production externality neutrality assumption, no pollution production externality neutrality assumption

## Introduction

### a) The pollution production problem separating golden paradigms and flawed paradigms

It has been pointed out that there is a pollution problem (POP) separating polluting markets or dirty markets from no polluting ones or clean ones (Muñoz 2022), and if we make the polluting market be the flawed paradigm (FLP) and the no polluting market be the golden paradigm (GOP), then the golden paradigm (GOP)-flawed paradigm based sustainability framework can be stated as indicated in Figure 1 below:

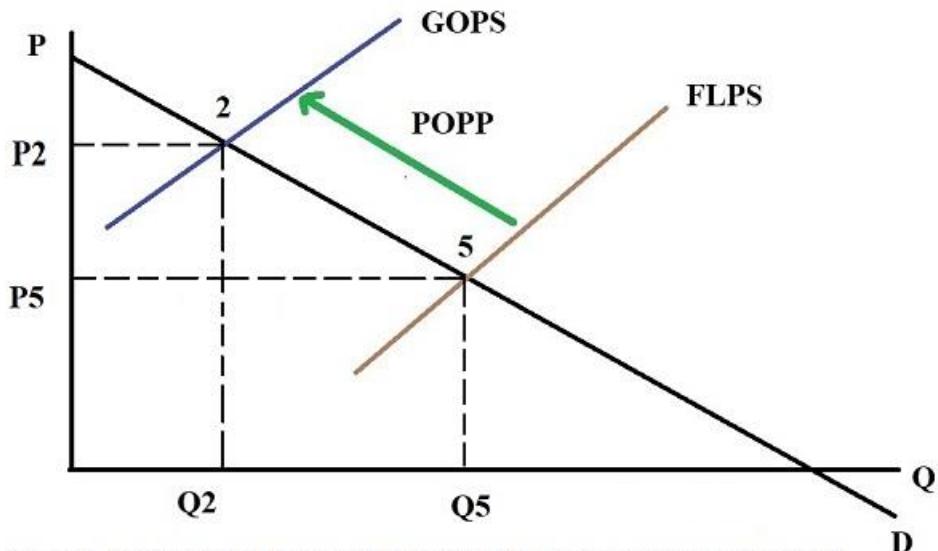


Figure 1 The golden paradigm(GOP)-Flawed paradigm(FLP) based true sustainability framework

Figure 1 above indicates the following: i) at point 1 there is a golden paradigm(GOP), where optimal production and consumption is  $Q_2$  at the optimal price  $P_2$ , and no pollution production problem exists here as there is no external market failure nor internal market failure; ii) at point 5 we have a flawed paradigm(FLP), where optimal production and consumption is  $Q_5$  at the optimal price  $P_5$ , and there is a pollution problem at point 5 as there is an external market failure, but there is no internal market failure; and hence, iii) there is an external pollution production problem(POPP) separating flawed paradigms (FLP) from golden paradigms(GOP). We can also see in Figure 1 above that production and consumption in flawed paradigms(FLP) is

higher than in golden paradigms as flawed paradigm market prices(FLPMP) are lower than golden paradigm market prices(GOPMP) so that  $Q_5 > Q_2$  since  $P_5 < P_2$ .

### Implication 1:

*There is a pollution production problem separating flawed paradigms from golden paradigms as the flawed paradigms under component optimality works under external market failures*

### b) The expansion and contractions of golden paradigms and flawed paradigms

If we assume that golden paradigms (GOP) and flawed paradigms(FLP) are experiencing internal and external market failures, then their expansion and contractions and related pollution production problems they may be associated with can be summarized as done in Figure 2 below:

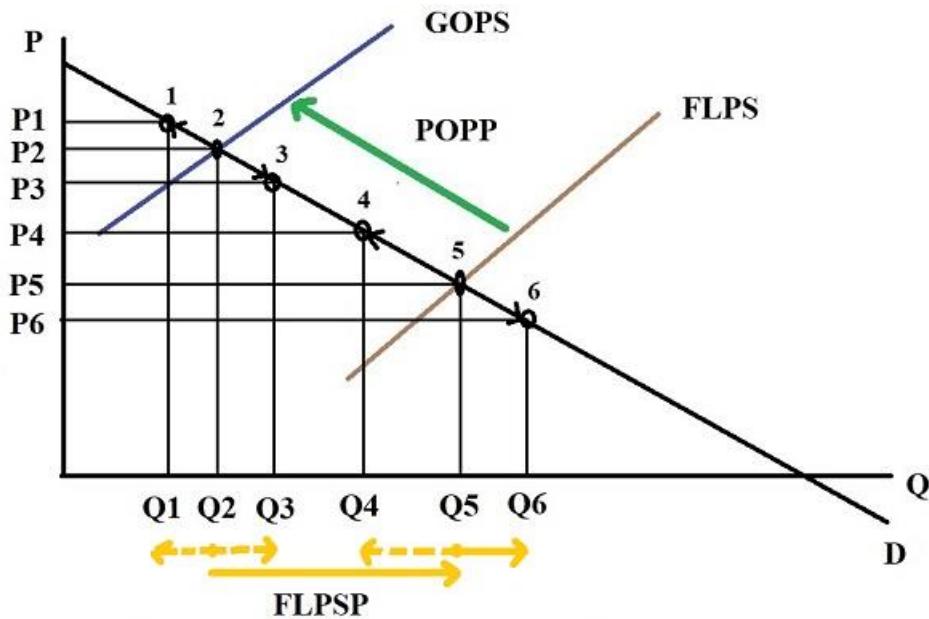


Figure 2 Golden paradigms(GOP) and flawed paradigms(FLP) under expansions and contractions and the flawed paradigm sustainability problem(FLPSP)

From the point of view of internal market failure we can look at point 2 and point 5 as points where there is no internal market failure in golden paradigms (GOP) and there is no internal market failure in flawed paradigms (FLP), respectively. From the point of view of external market failures we can look at point 2 and point 5 as points where there is no external market failures in golden paradigms(GOP) as no external pollution production(NPOPP) takes place there and there is an external market failure in flawed paradigms as there is there an external pollution production problem(POPP) that goes from point 5 to point 2 as indicated by the black arrow or flawed paradigm sustainability problem(FLPSP) as indicated by the golden continuous arrow going from left to write from Q2 to Q5, respectively.

We can highlight the following based on Figure 2 above with respect to golden paradigm dynamics: i) that Point 1 and point 3 can be seen as points of internal golden paradigm failure where market conditions bring the optimal price found at point 2 higher as in point 1 and lower as in point 3, ii) that each of these expansion and contraction in golden paradigms have no impact on the pollution production problem(POPP) as indicated by the broken golden arrows from Q2 to Q1 and from Q2 to Q3 for the contraction from point 2 to point 1 and the expansion from point 2 to point 3; and iii) that here there is no external market failure here at point 2, and hence, not external consequences of pollution production problem expansions and contractions.

We can state the following aspects using Figure 2 above with respect to flawed paradigm dynamics: i) that Point 4 and point 6 can be seen as points of internal flawed paradigm failure where market conditions bring the optimal price found at point 5 higher as in point 4 and lower as in point 6, ii) that each of these expansion and contraction in flawed paradigms have an impact on the pollution production problem(POPP), where a contraction as indicated by the broken golden arrows from Q5 to Q4 when you go from point 5 to point 4 contracts the pollution production problem while the expansion from Q5 to Q6 when you go from point 5 to point 6 expands the pollution production problem as indicated by the continuous yellow arrow going from Q5 to Q6, and iii) that here there is external market failure here at point 5, and hence, there are external expansion and contraction consequences associated with internal market failure dynamics.

### **Implication 2:**

*Golden paradigm expansions and contractions and flawed paradigm expansions and contractions may or may not affect the pollution production problem separating them and there is a direct link between the pollution production problem dynamics and the flawed paradigm sustainability gap dynamics as flawed paradigm market failure dynamics change.*

### **c) The link between contractions and expansions and expected government action**

We can use Figure 2 above to link expected government intervention or action to the expansion and contractions highlighted there; and the nature of this expected government action varies depending: i) on whether we are talking about golden paradigms or responsible behavior based expansion and contractions or flawed paradigms or irresponsible behavior based expansions and contractions; ii) on whether we are talking about internal market failure or external market failure in each of those markets; iii) on whether we are talking about internal market failure corrections or external market failure corrections; and iv) on whether we are talking about a world under pollution production neutrality assumptions or no pollution neutrality assumptions. And the need to link and understand the implications of these contractions and expansions to expected government action and its links, negative or positive to the pollution production problem in simple terms makes the following question relevant: How can the golden paradigm-flawed paradigm sustainability based framework be used to provide an overview of the expected government monitoring and support role in world driven by responsible and irresponsible market behavior under pollution production neutrality and no neutrality assumptions. And the main goal of this paper is to show step by step how this framework can be expanded and used to provide an overview of expected government action in

the face of responsible and irresponsible market dynamics under pollution production neutrality assumptions and under no pollution neutrality assumptions.

## **Goals of this paper**

i) To expand the framework in Figure 2 to point out the expected response to market failure dynamics in both golden paradigms and flawed paradigms to correct them; ii) To stress the expected government actions when dealing with golden paradigm dynamics under no pollution production neutrality assumptions; iii) To highlight the expected government actions when dealing with flawed paradigm dynamics under no pollution production neutrality assumptions; iv) To point out the expected government actions when dealing with golden paradigm dynamics under pollution production neutrality assumptions; v) To indicate the expected government actions when dealing with flawed paradigm dynamics under pollution production neutrality assumptions; vi) To indicate the golden paradigm(GOP)-flawed paradigm(FLP) based sustainability framework under no internal market failure, but under external market failure; vii) To state the golden paradigm(GOP)-flawed paradigm(FLP) based sustainability framework under expansion and relevant implications when under no internal market failure, but under external market failure.; viii) To show the golden paradigm(GOP)-flawed paradigm(FLP) based sustainability framework under no internal market failure, but under external market failure: the case when paradigms are under no pollution production externality assumption and their respective expected government action; ix) To share the golden paradigm(GOP)-flawed paradigm(FLP) based sustainability framework under no internal market failure, but under external market failure: the case when paradigms are under pollution production externality assumption and their respective expected government action; x) To represent the working of golden market paradigms and flawed market paradigms and unsustainability limits using the golden paradigm-flawed paradigm based sustainability framework.

## **Methodology**

1) The terminology used in this paper and key concept are provided; 2) The framework in Figure 2 above is expanded to point out the expected responses to market failure dynamics in both golden paradigms and flawed paradigms to correct them; 3) The expected government actions when dealing with golden paradigm dynamics under no pollution production neutrality assumptions are indicated; 4) The expected government actions when dealing with flawed paradigm dynamics under no pollution production neutrality assumptions are pointed out; 5) The expected government actions when dealing with golden paradigm dynamics under pollution production neutrality assumptions are shared; 6) The expected government actions when dealing with flawed paradigm dynamics under pollution production neutrality assumptions are highlighted; 7) The golden paradigm(GOP)-flawed paradigm(FLP) based sustainability framework under no internal market failure, but under external market failure is stated; 8) The golden paradigm(GOP)-flawed paradigm(FLP) based sustainability framework under expansion

and relevant implications when under no internal market failure, but under external market failure is shared; 9) The golden paradigm(GOP)-flawed paradigm(FLP) based sustainability framework under no internal market failure, but under external market failure: the case when paradigms are under no pollution production externality neutrality assumption and their respective expected government action is stressed; 10) The golden paradigm(GOP)-flawed paradigm(FLP) based sustainability framework under no internal market failure, but under external market failure: the case when paradigms are under pollution production externality neutrality assumption and their respective expected government action is presented; 11) The working of golden market paradigms and flawed market paradigms and unsustainability limits using the golden paradigm-flawed paradigm based sustainability framework is demonstrated; and finally, 12) Some food for thoughts and relevant conclusions are provided.

## Terminology

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GOP = Golden paradigm

GOPS = Golden paradigm supply

FLP = Flawed paradigm

FLPS = Flawed paradigm supply

GOPMP = Golden paradigm market price   FLPMP = Flawed paradigm market price

POPP = Pollution production problem   NPOPP = No pollution production problem

FLPSP = Flawed paradigm sustainability problem   SG = Sustainability gap

P = Paradigm/market price

Q = Paradigm/market quantity produced/consumed

D = Paradigm/market demand

MS = Paradigm/market supply

P<sub>i</sub> = Paradigm/market price “i”

Q<sub>i</sub> = Paradigm/market quantity “i”

YS = Yellow sustainability

TS = True sustainability

S = Sustainability

FUS = Full unsustainability

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## Relevant concepts

1) **Golden paradigm**, *a world without abnormalities embedded in it.*

**2) Flawed paradigm,** *a world with abnormalities embedded in it.*

**3) Pollution production problem,** *the situation created when flawed paradigms externalize non-dominant component issues.*

**4) Sustainability,** *the world under full cost internalization.*

**5) Market expansion,** *an increase in market activity.*

**6) Market contraction,** *a decrease in market activity.*

**7) Government intervention,** *the action taken to address market failures.*

**8) Market failure,** *the situation created by internally and/or externally distorted market prices.*

**9) Internal market failure,** *the situation created by internally distorted market prices.*

**10) External market failure,** *the situation created by externally distorted market prices.*

**11) Optimal expansion,** *an increase in optimal economic activity, an efficient expansion*

**12) Non-optimal expansion,** *an increase in non-optimal economic activity. an inefficient expansion*

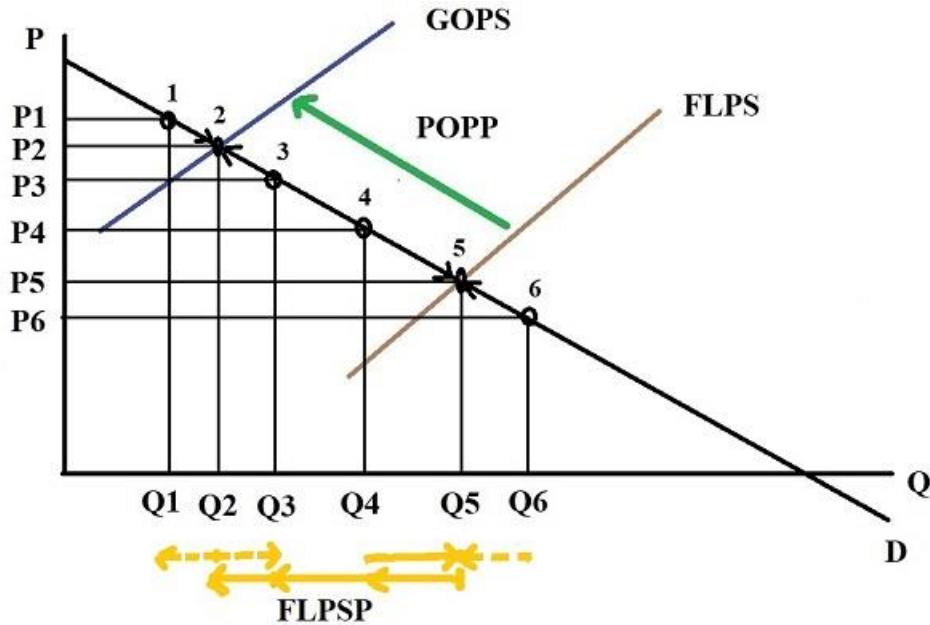
**13) Externality neutrality assumption,** *markets can expand for ever without generating externalities or pollution production problems, it allows you to ignore the presence and the need for action in the face of real pollution production problems by just assuming them away.*

**14) No externality neutrality assumption,** *markets cannot expand for ever as they generate externalities as they expand, which accumulate through time to a point that they can lead either to paradigm collapse if left alone or vertical paradigm shift if the governments plays its overseer role properly, it does not allow you to ignore the present and the need for action in the face of real pollution production problems as you can no or you can no longer assume them away.*

**15) Distorted market prices,** *prices that deviate from optimal market prices due to endogenous and/or exogenous issues*

### **Expected corrections to internal market failures and external market failure dynamics in both golden paradigms and flawed paradigms**

We should expect the following actions to maintain the levels of economic activity they want to maintain and correct internal and external market failures in both golden paradigms and flawed paradigms that make economic activity to deviate from the chosen level as indicated in Figure 3 below:



**Figure 3** Golden paradigms(GOP) and flawed paradigms(FLP) under expansions and contractions and the flawed paradigm sustainability problem(FLPSP) and the expected goverment response to internal and external market dynamics

Let's assume that point 2 represent the level of activity the government wants to maintain in the case of the golden paradigm, where point 1 and point 3 are points of internal market failure and point 2 does not have an external market failures as golden paradigms are in an optimal path, and that point 5 represents the level of economic activity the government wants to maintain in the case of the flawed paradigm, where point 4 and point 6 are points of market failure and point 5 is a point of external market failure and component specific optimality. And notice that golden paradigms and flawed paradigm are separated by the pollution production problem POPP or the flawed paradigm pollution production sustainability problem (FLPSP). Then Figure 3 above reflects the actions that the government can take to correct both internal and external market failures; and it also indicates the impacts these actions may or may not have on the pollution production problem (POPP) reducing it or expanding it.

### Implication 3:

*There is an expectation that governments will take action to address internal and external market failures in golden paradigms and flawed paradigms as it is its duties to fix market failures so economies are run efficiently.*

**The expected government actions when dealing with golden paradigm dynamics under no pollution production neutrality assumptions**

The internal market failure and the no external market failure situation under no pollution production neutrality assumptions for golden paradigms is summarized as done in Figure 4 below:

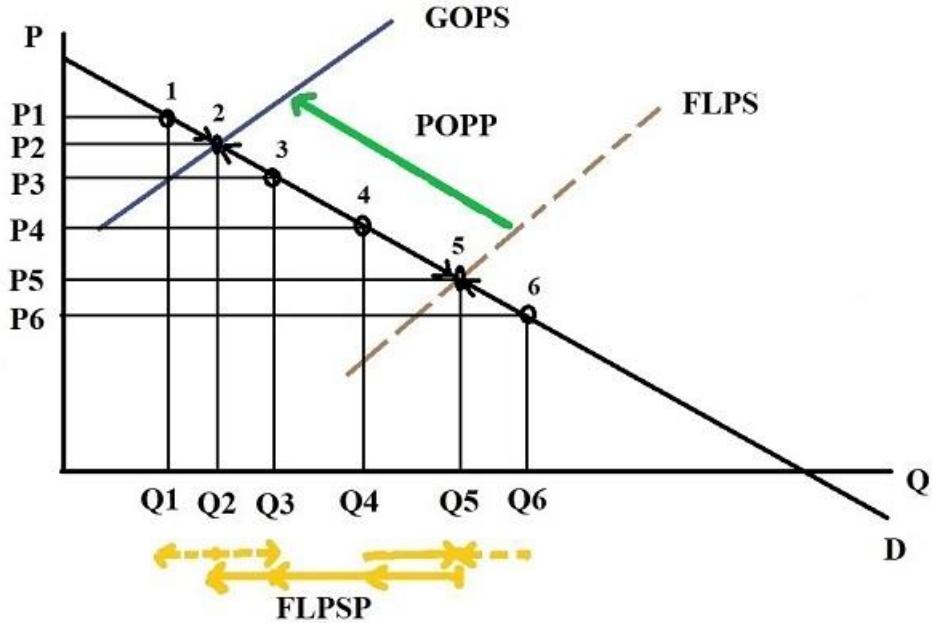


Figure 4 The expected governments actions in golden paradigms under no pollution production externality neutrality assumptions and internal market failures. Notice that here there are no external market failures

Point 2 in Figure 4 above is the point of optimal golden paradigm optimality the government is trying to ensure and the arrows from point 1 to point 2 and from point 3 to point 2 are the optimal actions the government is expected to take to ensure an optimal expansion from point 1 to point 2 and an optimal contraction from point 3 to point 2, both actions needed to correct specific types of internal market failure in golden paradigms. Notice that both of those government actions do not affect the pollution production problem which is real as indicated by the continuous green arrow going from FLPS to GOP as optimal paradigms do not have externality producing problems as externalities here are endogenous issues so internal market failures or not, golden paradigms do not have a pollution production sustainability problem. Hence, the no pollution production neutrality assumption does not affect the golden paradigm internal market failure dynamics as no externality issues are created, and since it does not have external market failures, then the no pollution neutrality assumption is irrelevant here.

The following information can be highlighted based on Figure 4 above under no pollution neutrality assumptions in the case when the government is addressing market failures in the golden paradigm GOP such as those at point 2: i) the government will correct the market failure at point 1 by supporting an expansion of optimal production and consumption from point 1 to point 2 , and ii) the government will correct the market failure at point 3 by supporting a contraction of optimal production and consumption from point 3 to point 2, both actions having no impact on the pollution production problem POPP as they do not create pollution production problems, which again makes the assumption “working under no pollution production neutrality

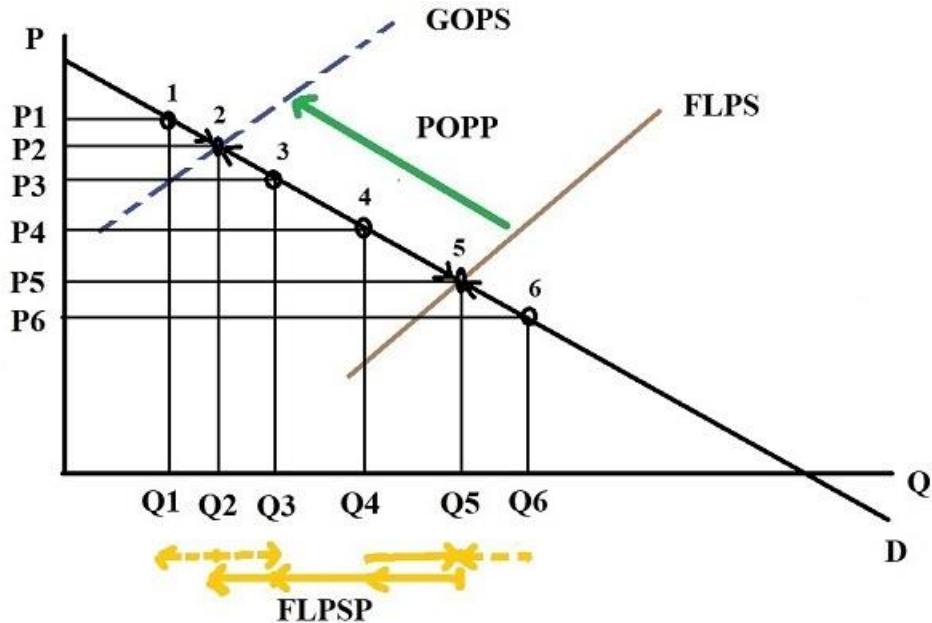
assumptions” irrelevant as indicated by the broken yellow arrows going from Q2 to Q1 and from Q2 to Q3.

#### Implication 4:

*The government will address internal market failures in golden paradigms by supporting optimal expansions and optimal contractions to maintain the optimal level of production and consumption desired for the golden paradigm. Even though the no pollution production neutrality assumption makes the issue real, the assumption is irrelevant here as golden paradigms do not have a pollution production problem as their dynamics follows an optimal path.*

**The expected government actions when dealing with flawed paradigm dynamics under no pollution production neutrality assumptions meaning that the pollution production problem is real**

The internal market failure and the external market failure situation under no pollution production neutrality assumptions for flawed paradigms which makes the pollution production problem linked to the flawed paradigm is real is indicated in Figure 5 below:



**Figure 5** Expected government action in flawed paradigms(FLP) when under no pollution production neutrality assumptions and internal market failures. Notice that here there are external market failures that need to be addressed.

Point 5 in Figure 5 above is the point of flawed paradigm optimality the government is trying to ensure that economic activity stays at point 5, and the arrows from point 4 to point 5 and from point 6 to point 5 are the actions the government is expected to take to ensure that

production and consumption continues at point 5 level, an expansion from point 4 to point 5 and a contraction from point 6 to point 5, both actions needed to correct specific types of internal market failure in flawed paradigms. Notice that both of those government actions have different impacts on the pollution production problem, which is real as indicated by the continues green arrow going from FLPS to GOPS, as here a government action that expands market activity expands the pollution production problem as indicated by the continues yellow arrow going from Q4 to Q5; and a government action that contracts market activity contracts the pollution production problem, which is real as indicated by the broken yellow arrow going from Q6 to Q5. Notice too in Figure 5 above that since the pollution production problem POPP at point 5 is real because there is an external market failure there, it needs to be addressed by the government by closing the flawed paradigm sustainability problem FLPSP as indicated by the continuous yellow arrow that goes from point 5 to point 2; and see that the expected government action is to fix the flawed paradigm pollution production fully by internalizing the pollution production problem and transform the pollution production point 5 into the pollution productionless point 2 as the continuous yellow arrow that goes from point 5 to point 2 shows. In other words, as the external market failure in Figure 5 above is real and the pollution production problem is real, the government cannot ignore it and it must fully fix the external market failure.

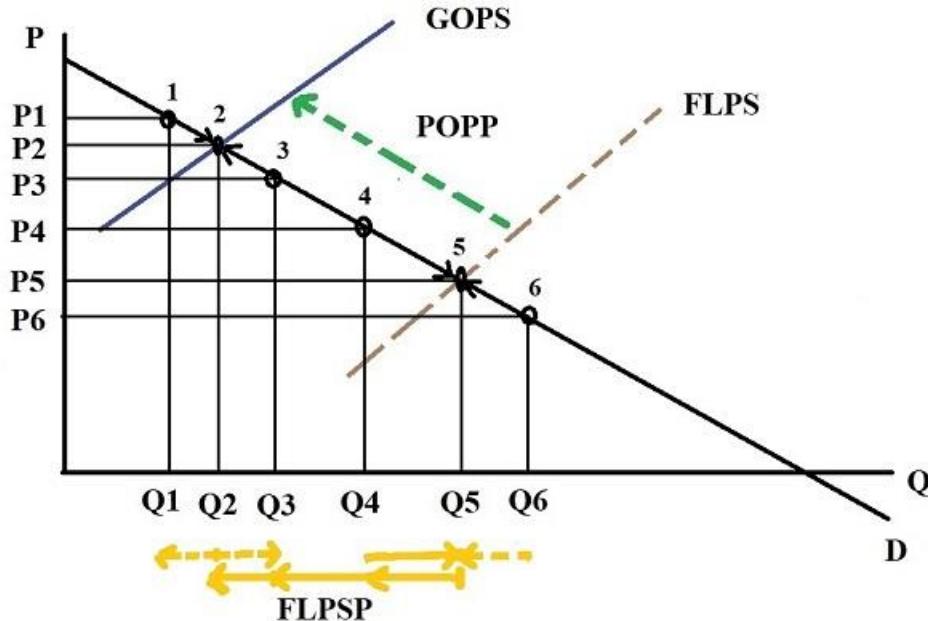
The following information can be pointed out based on Figure 5 above under no pollution neutrality assumptions in the case when the government is addressing market failures in the flawed paradigm FLP and the pollution problem being created is taken as real such as those at point 5: i) the government will correct the market failure at point 4 by supporting an expansion of production and consumption from point 4 to point 5 expanding the pollution production problem as it is a real problem here , and ii) the government will correct the market failure at point 6 by supporting a contraction of production and consumption from point 6 to point 5 reducing the real pollution production problem, and therefore, both actions have different impacts on the pollution production problem POPP that is real here, as it is working under no pollution production neutrality assumptions which makes pollution production a real problem as indicated by the continuous yellow arrow going from Q4 to Q5 and by the broken yellow arrows going from Q6 to Q5, respectively.

### **Implication 5:**

*The government will address internal market failures in flawed paradigms by supporting market expansions and contractions to maintain the optimal level of production and consumption desired for the flawed paradigm while having real positive impacts and negative impacts on the pollution production problem linked to the flawed paradigm, positive when government action contracts the flawed paradigm and negative when the action expands economic activity. And the government will address fully the flawed paradigm sustainability problem or the pollution production problem as it is real and it cannot be assumed away, and when doing so it will shift the flawed paradigm world to a golden paradigm based world.*

**The expected government actions when dealing with golden paradigm dynamics under pollution production neutrality assumptions, where the pollution problem is real but it is assumed away**

The internal market failure and the no external market failure situations under pollution production neutrality assumptions for golden paradigms are summarized as done in Figure 6 below:



**Figure 6** Expected government actions in golden paradigms(GOP) under pollution production externality neutrality assumptions and internal market failures. Notice that here too there are no external market failures to be addressed.

Point 2 in Figure 6 above is the point of optimal golden paradigm optimality the government is trying to ensure and the arrows from point 1 to point 2 and from point 3 to point 2 are the optimal actions the government is expected to take to ensure an optimal expansion from point 1 to point 2 and an optimal contraction from point 3 to point 2, both actions needed to correct specific types of internal market failure in golden paradigms. Notice that both of those government actions do not affect the pollution production problem which is real by it is assumed away as indicated by the broken green arrow going from FLPS to GOPS as optimal paradigms do not have externality problems as externalities here are endogenous issues so internal market failures or not, golden paradigms do not have a pollution production sustainability problem. Therefore, the pollution production neutrality assumption does not affect the golden paradigm internal market failure dynamics; and since it does not have external market failures, the pollution neutrality assumption is again irrelevant here.

The following information can be highlighted based on Figure 6 above under pollution neutrality assumptions when the pollution problem is real in the case when the government is addressing market failures in the golden paradigm GOP such as those at point 2: i) the government will correct the market failure at point 1 by supporting an expansion of optimal

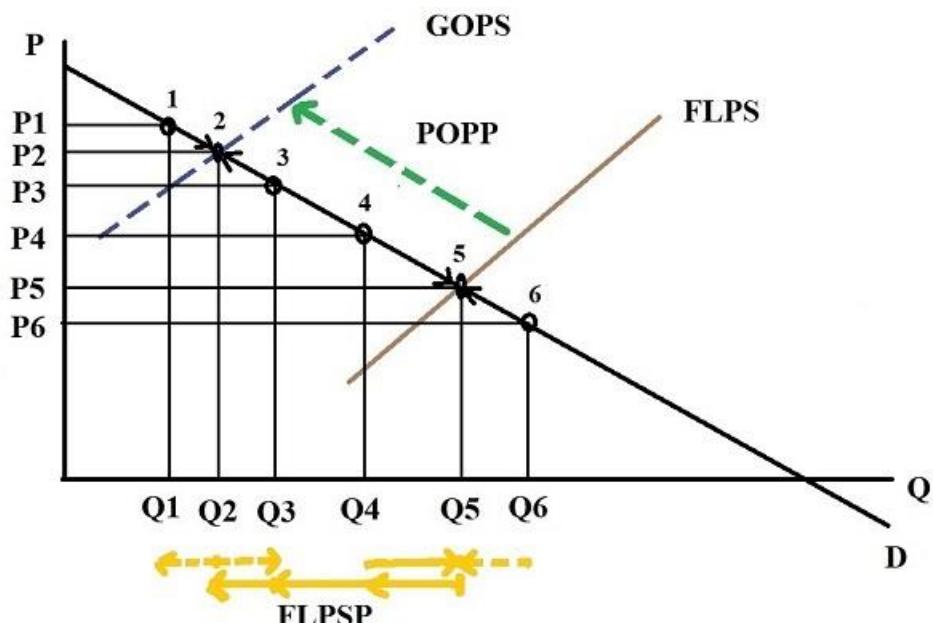
production and consumption from point 1 to point 2 , and ii) the government will correct the market failure at point 3 by supporting a contraction of optimal production and consumption from point 3 to point 2, both actions having no impact on the pollution production problem POPP as it does not produces externalities making the “working under no pollution production neutrality assumptions” irrelevant as indicated by the broken yellow arrows going from Q2 to Q1 and from Q2 to Q3.

### Implication 6:

*The government will address internal market failures in golden paradigms by supporting optimal expansions and optimal contractions to maintain the optimal level of production and consumption desired for the golden paradigm. Even though the pollution production neutrality assumption makes assumes away a real pollution production issue, the assumption is irrelevant here as golden paradigms do not have a pollution production problem as their behavior follows optimal dynamics.*

**The expected government actions when dealing with flawed paradigm dynamics under pollution production neutrality assumptions: here the pollution production problem is real but it is assumed away**

The internal market failure and the external market failure situation under pollution production neutrality assumptions for flawed paradigms when the pollution production problem linked to the flawed paradigm is real, but assumed away is indicated in Figure 7 below:



**Figure 7** The expected government actions in flawed paradigm(FLP) under pollution production externality neutrality assumptions and internal market failures that expand or contract pollution production, but they are assumed away. Notice that here too there are external market failures but they are assumed away

Point 5 in Figure 7 above is the point of flawed paradigm optimality the government is trying to ensure and the arrows from point 4 to point 5 and from point 6 to point 5 are the actions the government is expected to take to ensure that production and consumption stay at point 5 level, an expansion from point 4 to point 5 and a contraction from point 6 to point 5, both actions needed to correct specific types of internal market failure in flawed paradigms. Notice that both of those government actions have different impacts on the pollution production problem, which is real but assumed away as indicated by the broken green arrow going from FLPSP to GOPS, as here a government action that expands market economic activity expands the pollution production problem, but it is assumed away as indicated by the continuous yellow arrow going from Q4 to Q5; and a government action that contracts market activity contracts the pollution production problem too, and this impact is real, but this real impact is assumed away as indicated by the broken yellow arrow going from Q6 to Q5. Notice too in Figure 7 above that since the pollution production problem POPP at point 5 is real because there is an external market failure there, then the flawed paradigm sustainability problem FLPSP is also real as indicated by the continuous yellow arrow going from Q5 to Q2, but both issues are assumed away, and hence, even though there is a real need to fix those problems the government will not fix the external market failure at point 5 as since the pollution problem is assumed away to need to fix it is also assumed away.

The following information can be pointed out based on Figure 7 above under pollution neutrality assumptions when the pollution problems are real in the case when the government is addressing market failures in the flawed paradigm FLP such as those at point 5: i) the government will correct the market failure at point 4 by supporting an expansion of production and consumption from point 4 to point 5 expanding a real pollution production problem, but this negative impact is assumed away , and ii) the government will correct the market failure at point 6 by supporting a contraction of production and consumption from point 6 to point 5 reducing the real pollution production problem, a positive impact that is being assume away, and therefore, both actions have different impacts on the pollution production problem POPP that is real, but assumed away as it is working under pollution production neutrality assumptions which means that any impacts on real problems can be assumed away as indicated by the continuous yellow arrow going from Q4 to Q5 and by the broken yellow arrows going from Q6 to Q5.

### **Implication 7:**

*The government will address internal market failures in flawed paradigms by supporting market expansions and contractions to maintain the optimal level of production and consumption desired for the flawed paradigm while having real positive impacts and negative impacts on the pollution production problem linked to the flawed paradigm, positive when government action contracts the flawed paradigm and negative when the action expands economic activity, but these real impacts are assumed away. And the government will not address the flawed paradigm sustainability problem or the pollution production problem, which is real, but assumed away as if a real problem is assumed away the need for a solution for it can also be assumed away.*

## The golden paradigm (GOP)-flawed paradigm (FLP) based sustainability framework under no internal market failure, but under external market failure

To understand expected government action when markets are working internally optimally but under external market failure the golden paradigm (GOP)-flawed paradigm (FLP) based sustainability framework can be stated as shown in Figure 8 below:

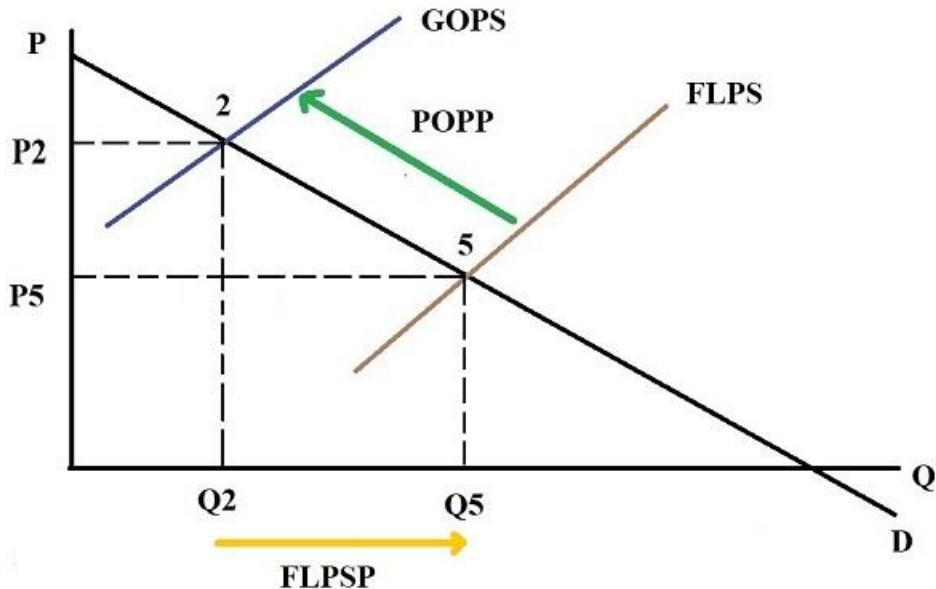


Figure 8 The golden paradigm(GOP)-Flawed paradigms(FLP) based true sustainability Framework under no internal market failure and under external market failures

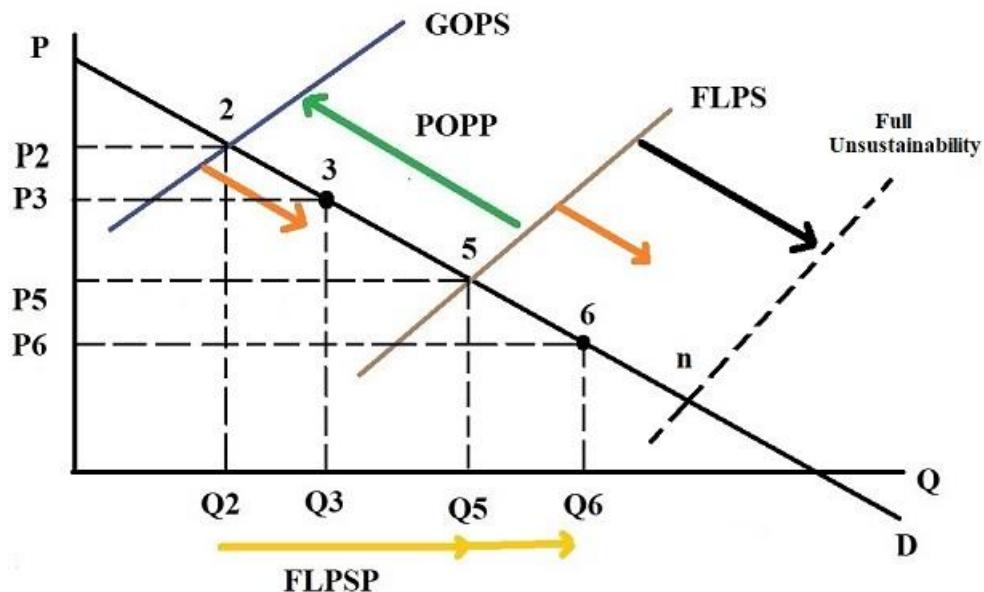
We can appreciate the following aspects based on Figure 8 above: i) that at Point 2 we have a golden paradigm GOP under no internal nor external market failure; ii) that at point 5 we have the flawed paradigm FLP under no internal market failure, but external market failure; iii) that there is a pollution production problem POPP separating golden paradigms from flawed paradigms; and iv) that there is a flawed paradigm sustainability problem FLPSP affecting the working of the flawed paradigm.

### Implication 8:

*The golden paradigm-flawed paradigm based sustainability framework can be used to highlight the existence of pollution production problems, sustainability problems and golden paradigms-flawed paradigm knowledge gaps that need to be closed if the government fulfills its responsibilities and fix the external market failure embedded in flawed paradigms.*

## The golden paradigm (GOP)-flawed paradigm (FLP) based sustainability framework when under no internal market failure, but under external market failure: the case of paradigm expansions in golden paradigms and in flawed paradigms

The idea of golden paradigm expansions and flawed paradigms expansions under no internal market failure, but with external market failures can be summarized as done in Figure 9 below:



**Figure 9 The golden paradigm(GOP)-Flawed paradigms(FLP) based true sustainability Framework under no internal market failure and under external market failures THE CASE OF MARKET EXPANSIONS AND THEIR IMPLICATIONS**

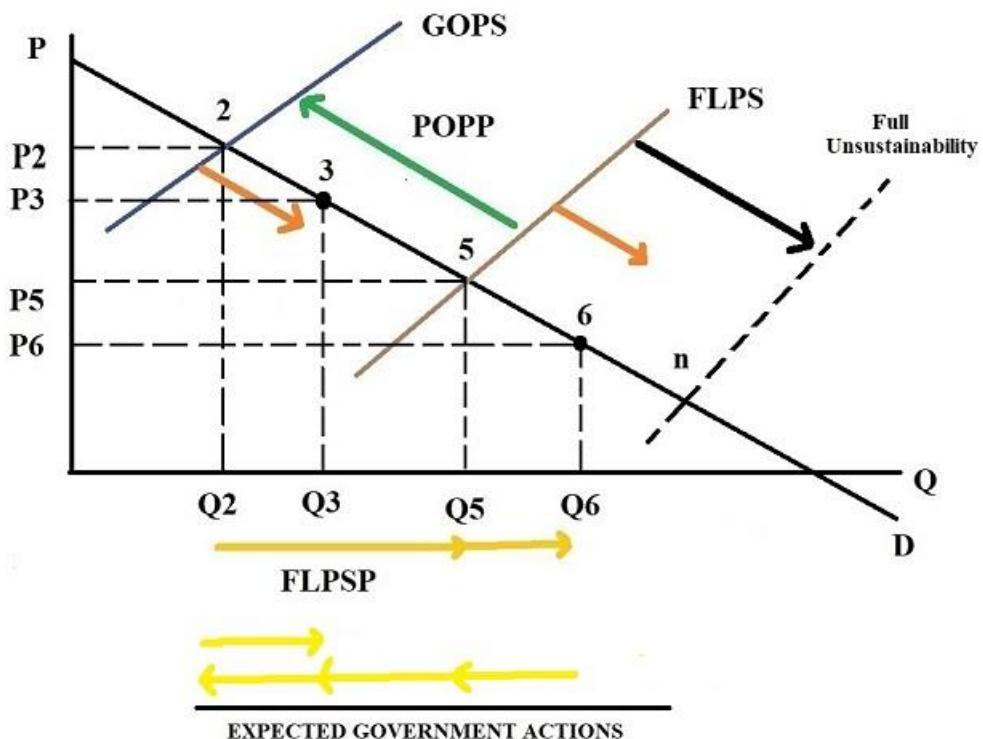
Figure 9 above shows the following: i) with respect to golden paradigms, there is an optimal expansion from point 2 to point 3, without creating pollution production problems or sustainability problems; and hence, golden paradigms expansions do not have unsustainability limits such as point “n”; ii) with respect to flawed paradigms, there is an expansion from point 5 to point 6 that expands the pollution production problem that exists from point 5 to point 2 by the distance from point 5 to point 6 as indicated by the continuous red arrow going from point 5 to point 6, and therefore, flawed paradigms expansions have an unsustainability limit such as point “n” as if it reaches there the flawed paradigm will collapse and to save its core values it may shift to a higher level paradigm just before collapse.

### Implication 9:

*Golden paradigms and flawed paradigms expand from left to right, but golden paradigms have no sustainability limits while flawed paradigms has a sustainability limit that lies before full unsustainability.*

**The golden paradigm (GOP)-flawed paradigm (FLP) based sustainability framework under no internal market failure, but under external market failure: the case of paradigm expansions and their implications under no pollution production externality neutrality assumption and respective expected government action**

The expected government actions when pollution production problems are real and they cannot be assumed away as there are no pollution production neutrality assumptions as situation that can be seen based on the information of Figure 10 below:



**Figure 10 The golden paradigm(GOP)-Flawed paradigms(FLP) based true sustainability Framework under no internal market failure and under external market failures THE CASE OF MARKET EXPANSIONS AND THEIR IMPLICATIONS under no externality neutrality assumptions and expected government actions**

We can see based on Figure 10 above that at point 3 the government has an optimal situation, which must be supported as you get a better optimal point without creating abnormalities; and at point 6 the government has a situation that must be discouraged as it makes the pollution problem that exist from point 5 to point 2 worse. In other words, in the case of the expansion of golden paradigms from point 2 to point 3 we should expect the government to implement an optimal support policy to help the golden paradigm market to expand from point 2 to point 3 as producing and consuming at point 3 is a better optimal option than producing and consuming at point 2 as the golden paradigm market price at point 3 is lower than the golden market price at point 2 so that  $GOPMP_3 = P_3 < GOPMP_2 = P_2$  and  $Q_3 > Q_2$ . In the case of the expansion of the flawed paradigms from point 5 to point 6 the government will have to

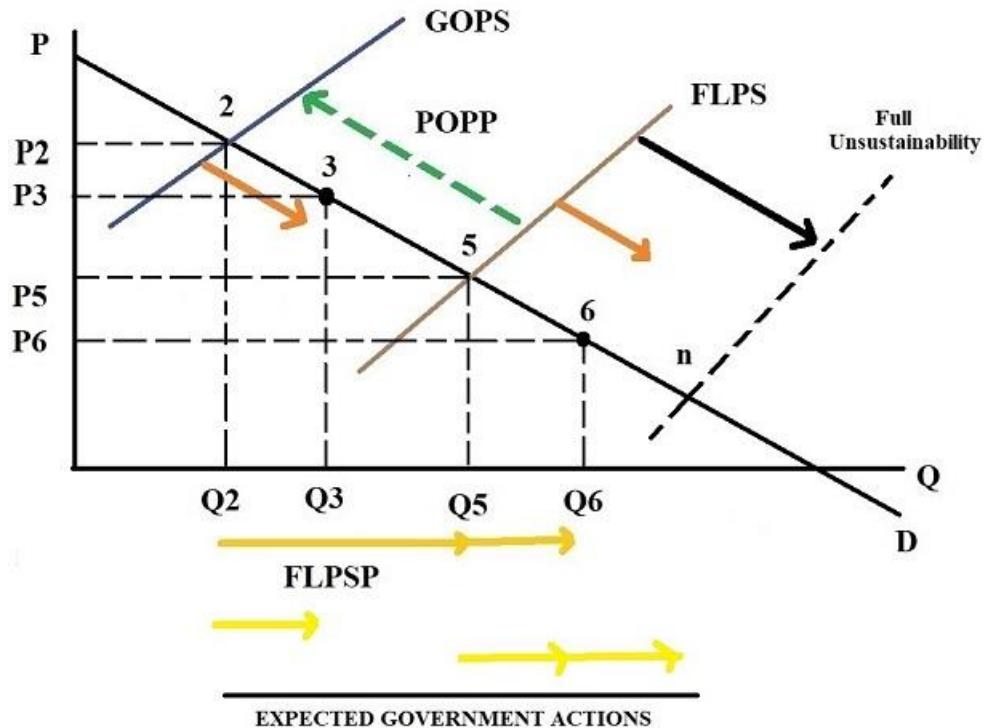
discourage it as fixing the pollution production problem is its role not expanding it so under no externality neutrality assumptions as the pollution production problem is real and it must be fixed we should expect the government to take action to discourage new expansions like from point 5 to point 6 and to internalized the full pollution production problem POPP to shift the flawed paradigm from point 5 to point 2 after contracting the flawed paradigm from point 6 to point 5 or internalizing the pollution production problem from point 6 to point 2 at once, saving the system from moving closer to full unsustainability. See that producing and consuming at point 2 is less than producing and consuming at point 5 and point 6 as  $Q_2 < Q_5 < Q_6$  and at point 2 there are no unsustainability pressures anymore.

#### **Implication 10:**

*Under no externality neutrality assumptions or under real pollution production problems that must be fixed government will see an optimal expansion in golden paradigms as actions that need to be supported as more is better there without creating externality issues while the government will see, given their duty to fix market failures, the expansion of flawed paradigms under external market failures, as actions that not just need to be discouraged, but actions that would not take place if they fixed the pollution production problem created by flawed paradigms through full pollution production problem internalization.*

**The golden paradigm (GOP)-flawed paradigm (FLP) based sustainability framework under no internal market failure, but under external market failure: the case of paradigm expansions and their implications under pollution production externality neutrality assumption when the pollution production problem is real and respective expected government action**

The expected government actions when pollution production problems are real, but assumed away as there are pollution production neutrality assumptions can be appreciated based on the situation shared in Figure 11 below:



**Figure 11** The golden paradigm(GOP)-Flawed paradigms(FLP) based true sustainability Framework under no internal market failure and under external market failures THE CASE OF MARKET EXPANSIONS AND THEIR IMPLICATIONS under pollution production neutrality assumptions and expected government action

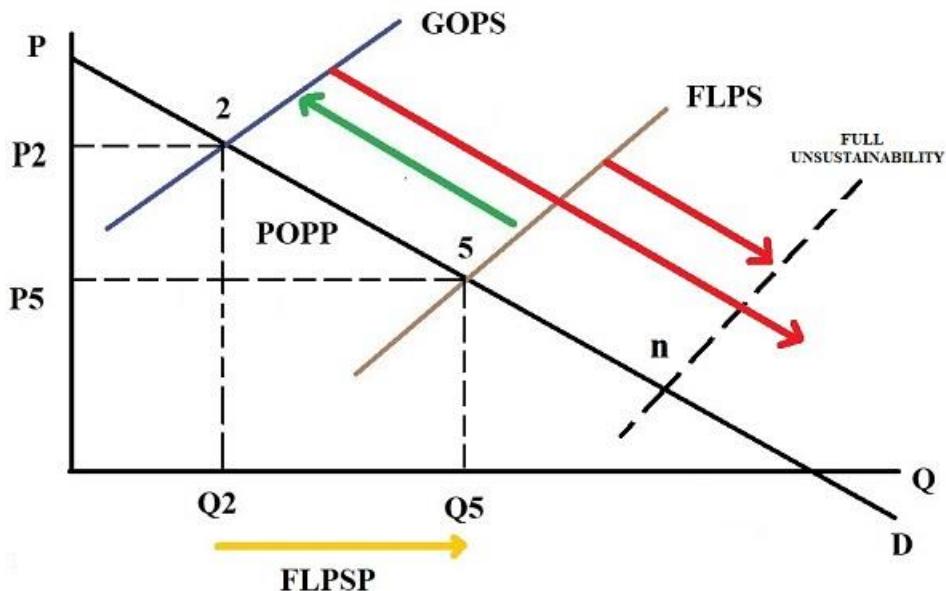
We can see based on Figure 11 above that at point 3 the government has again an optimal situation, which must be supported again as you get a better optimal point without creating abnormalities; and at point 6 the government given the pollution production neutrality assumption that assumes away a real pollution production problem has a situation that it will support and which will make the pollution production problem which is real worse, but it will assume this negative impact away. In other words, under the no pollution neutrality assumption when the pollution production problem is real the government will support the expansion of the flawed paradigm under external market failure instead of fixing the market failure and this is done assuming its negative role on irresponsible flaw paradigm expansion fully away. In other words, in the case of the expansion of golden paradigms from point 2 to point 3 we should expect the government to implement an optimal support policy to help the golden paradigm market to expand from point 2 to point 3 as producing and consuming at point 3 is a better optimal option than producing and consuming at point 2 as the golden paradigm market price at point 3 is lower than the golden market price at point 2 so that  $GOPMP_3 = P_3 < GOPMP_2 = P_2$  and  $Q_3 > Q_2$ . But in the case of the expansion of the flawed paradigms from point 5 to point 6 the government will not discourage it, but support it despite its negative impact on the real pollution production problem as under pollution externality neutrality assumptions there is no problem for the government to encourage irresponsible flawed market behavior as real problems are assumed away. And you can appreciate based on Figure 11 above that if the government continues supporting flawed market expansions beyond point 6, instead of fixing the external market failure under which the flawed paradigm is working, the government is helping the flawed paradigm to transition towards full unsustainability or toward point "n".

### Implication 11:

*Under externality neutrality assumptions or under real pollution production problems that must be fixed, but they are assumed away government will see an optimal expansion in golden paradigms as actions that need to be supported as more is better there without creating externality issues while the government will see, given their duty to fix market failures is being assumed away, the expansion of flawed paradigms under external market failures, as actions that not just need to be supported, but actions that need to be promoted as all the negative impacts those actions have on the real pollution production problem can be assumed away.*

### The working of golden market paradigms and flawed market paradigms and unsustainability limits

If we see golden paradigms and flawed paradigms as markets that tend to produce at the lowest cost possible, lowest golden paradigm market price possible and lowest flawed paradigm market price possible, respectively, then we will see them expand from left to right as shown in Figure 12 below:



**Figure 12** The golden paradigm(GOP)-Flawed paradigms(FLP) based true sustainability Framework under no internal market failure and under external market failures Both markets expand to produced at the lowest market price possible, but the flawed paradigm has limits to growth while the golden paradigm does not have.

Notice that Figure 12 above depicts a situation in which golden paradigms expand left to right as they tend to produce at the lowest golden paradigm market price possible and they have no limits to growth as they have no sustainability problems as shown by the continuous red arrow going from point 2/GOPS passing the full unsustainability zone. Then see that the expansion of flawed paradigms under external market failures as shown in Figure 12 goes also

from left to right as it tends to produce too at the lowest prices possible, but it has limits to growth as indicated by the red arrow going from point 5/FLPS to before the full unsustainability line or broken supply at point “n”.

### **Implication 12:**

*Both golden paradigms and flawed paradigms tend to produce at the lowest price possible, but while golden paradigms have no limits to growth, flawed paradigms have limits to growth. Since the government knowingly or not due to the pollution production neutrality assumptions under which it looks at market failures is helping the flawed paradigms to approach full unsustainability as real pollution production problems are being expanded and accumulated, and hence, the flawed paradigm sooner or later will tend towards collapse as it approaches full unsustainability, and if the opportunity comes the flawed paradigm will evolve vertically towards golden paradigms leaving the knowledge base of the flawed paradigm behind while carrying the core values of the flawed paradigm to the new paradigm so the new paradigm reflects the previous flawed paradigm core values. This idea of the vertical paradigm evolution route available under binding externality pressures when paradigms leave their knowledge base behind to save their core values in the case of flawed paradigms like the deep capitalism market or deep economy have been recently pointed out(Muñoz 2025).*

### **Food for thoughts**

1) In free markets and no knowledge gaps, is it the duty of governments to fix market failures or to patch them/manage the consequences of the failure? I think the duty is to fix them, what do you think?; 2) In free markets and no externality neutrality assumptions and no knowledge gaps, is it the duty of governments to fix market failures or to patch them/manage the consequences of the failure? I think the duty is to fix them, what do you think?; 3) In free markets and externality neutrality assumptions when the externality production problem linked to the working of free markets is real, does government’s market expansion policies helps promote irresponsible market behavior; and hence, it has a supporting role in driving free markets towards the point of system unsustainability but it is assumed away? I think yes, what do you think?; and 4) When you shift from free markets like free traditional markets to dwarf markets like dwarf green markets do the responsibility for market failure like environmental market failure shift from corporations/consumers to government? I think yes, what do you think?

### **Conclusions**

It was shown that the golden paradigm-flawed paradigm based sustainability framework can be used for understanding market failures in both golden paradigms and in flawed paradigms, be it internal market failures or external market failures or both. It was pointed out how these market failures can expand or contract as well as how reversing expansion and contractions can be linked to expected government actions. Then it was indicated that under no externality neutrality assumptions governments should be expected to do the right thing, to fix golden paradigm expansions and contractions to maintain desirable levels of golden paradigm

based economic activity and governments are expected to fix expansion and contractions led by internal flawed paradigm market failures as well and to fix the external market failures of flawed paradigms as pollution production problems here are real and they cannot be assumed away and since the primary responsibility of governments is to fix market failures they are expected to fully fix this external market failure. Then it was stressed that under externality neutrality assumptions the government will treat golden paradigm based expansions and contractions the same way as without pollution production externality assumptions, they will be optimally fixed while under pollution production externality assumptions governments will support irresponsible flawed paradigms expansion helping them to approach the full unsustainability zone as they assume that the real pollution production problem which they are helping to expand can be assumed away. And finally, it was described how both golden paradigm and flawed paradigms expands following the path of the lowest market price possible, but flawed paradigms have limits to growth while golden paradigms do not have limits to growth.

## References

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