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Short Elucidating Note 130: Combining the general true structural sustainability validity theorem and the general true structural sustainability win-win theorem to state the universal general true structural sustainability win-win validity theorem that applies across domains.

By

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Abstract

Consistency conditions can be seen both from the structural and true sustainability point of view using qualitative comparative means; and when these views are combined you get the general true structural sustainability validity theorem where Ki = TSi = Validity conditions. Win-win conditions can also be seen both from the structural and true sustainability point of view using qualitative comparative means; and when these views are merged you get the general true structural sustainability win-win theorem where Ki = TSi = WIN!. And the integration of these two theorems using qualitative comparative means lead to the universal general true structural sustainability win-win validity theorem, where Ki = TSi = TSS-WIN!. And the discussion above implies in other words that separate structural and sustainability results can be integrated through qualitative comparative and additive linking processes to generate a universal true structural sustainability win-win validity theorem applicable across domains.

Goals of paper

a) Specific goal

i) To derive the general true structural sustainability validity theorem structural and true sustainability based conjunctural conditions; ii) To state the general true structural sustainability win-win theorem structural and true sustainability based win-win conditions; and iii) To merge

the two theorems above to highlight the nature and implications of the universal general structural sustainability win-win validity theorem.

b) General goals

i) To show how the combination of independent general falsification theorems can lead to the statement of the universal general true structural sustainability win-win validity theorem; and ii) highlight how additive paradigm linking and qualitative comparative merging thinking can be used as tools for extending and integrating theoretical frameworks.

Methodology

The paper is presented in the following order for simplicity and consistency: i) The terminology used in this paper is introduced; ii) The general viability/collapse logic is introduced separately in terms of structural and true sustainability consistency conditions to develop the general structural validation theorem and the general true sustainability validation theorem; iii) Those two different validation theorems are merged to state the general true structural sustainability validity theorem; iv) The general win-win/ lose-lose logic is introduced separately in terms of structural and true sustainability win-win conditions to produce the general structural win-win theorem and the general true sustainability win-win theorem; v) Those two different general win-win theorems are merged to highlight the structure of the general true structural sustainability win-win theorem; vi) The general true structural sustainability validity theorem and the general true structural sustainability win-win theorem are merged to arrive to the universal general true structural sustainability win-win validation theorem; and vii) Some specific and general conclusions are provided.

Terminology

Ki = Lj = Structural balance consistency

Ki = Structural component Ki consistency

TSi = XYZ = True sustainability balance consistency

TSi = True sustainability component TSi consistency

WIN! = Win-win conditions

Ki = WIN! = Structural win-win conditions

TSi = WIN! = True sustainability win-win conditions

TSS-WIN! = General true structural sustainability win-win conditions

GTSSVT = General true structural sustainability validity theorem

GTSSWWT = General true structural sustainability win-win theorem

UGTSSWWVT = General true structural sustainability win-win validation theorem

→ = Implies or flows from = → implies equal condition

≈ → implies conditional condition ≠ → implies unequal condition

∩→ implies interception Ø → implies empty

The general viability/collapse logic

It can be stated from 2 different point of view, structural viability and true sustainability viability as indicated below:

1) The general structural viability/structural collapse logic

The general structural falsification theorem and its structure and operation and implications have been recently highlighted (Muñoz 2026a; Muñoz 2026a), and the structural balance equality to be respected or violated can be summarized as:

Ki = Lj

And this means that:

Ki = Lj ⇒ Structural validity

And this implies that:

Ki → Structural viability

The working of the structural validity logic:

<u>a) The case of full structural validity</u>

If the structural balance equality is fully respected, then:

Ki = Lj ⇒ Full structural validity

And this means:

Ki → Full structural viability

<u>b) The case of partial structural validity</u>

If the structural balance equality is partially respected then:

Ki ≈ Lj ⇒ Conditional structural viability

<u>c) The case of full structural invalidity</u>

If the structural equality is fully violated, then

Ki∩Lj = ∅ ⇒ Full structural collapse

2) The general true sustainability validity/true sustainability collapse logic

The general true sustainability validation/ falsification theorem and its structure and implications have been recently pointed out (Muñoz 2026b), and the true sustainability balance equality to be respected or violated can be summarized as:

TSi = XYZ

And this means:

TSi = XYZ ⇒ True sustainability validity

This implies:

-TSi → True sustainability viability

The working of the true sustainability viability logic

<u>a) The case of full true sustainability validity</u>

If the true sustainability balance is fully respected, then:

TSi = XYZ ⇒ Full true sustainability validity

And this means:

TSi → Full true sustainability viability

<u>b) The case of partial true sustainability validity</u>

If the true sustainability balance is partially respected, then:

TSi ≈ XYZ ⇒ Conditional true sustainability viability

<u>c) The case of full true sustainability invalidity</u>

If the true sustainability balance is fully violated, then:

TSi∩XYZ = ∅ ⇒ Full true sustainability collapse

The general true structural sustainability validity theorem (GTSSVT)

If structural validity consistency conditions (Ki = Lj) equal true sustainability consistency conditions (TSi = XYZ), then the following holds true:

Ki = Lj = TSi = XYZ ⇒ General Structural validity = General true sustainability validity

And this means that:

Ki = TSi → True structural sustainability validity

And therefore:

Ki = TSi → True structural sustainability viability

The working of the general structural sustainability validity logic:

<u>a) The case of full true structural sustainability validity</u>

If the true structural sustainability balance is respected fully, then:

Ki = Lj = TSi = XYZ ⇒ General full true structural sustainability validity

Ki = TSi → General full true structural sustainability viability

<u>b) The case of partial true structural sustainability validity</u>

If the true structural sustainability balance is partially respected, then:

Ki ≈ Lj ≈ TSi ≈ XYZ ⇒ Conditional general true structural sustainability viability

<u>c) The case of full true structural sustainability invalidity</u>

If the true structural sustainability balance is fully violated, then:

Ki∩Lj = TSi∩XYZ = ∅ ⇒ General full true structural sustainability collapse

In summary, the general true structural sustainability validity theorem (GTSSVT) can be stated as follows:

GTSSVT = Ki = Lj = TSi = XYZ ⇒ General true structural sustainability validity

The general win-win/lose-lose logic

It can be stated from 2 different angles, structural viability and true sustainability viability angles as described below:

1) The general structural win-win/structural lose-lose logic

The extension from structural validity thinking (Ki = Lj) to captures win-win situations (WIN!) and implications has been recently shared ((Muñoz 2026c), and this theorem can be summarized as done below:

Ki = Lj = WIN!

And this means:

Ki = Lj = WIN! ⇒ Structural validity = Structural win-win conditions

And therefore:

Ki = WIN! → Structural win-win conditions

The working of the structural win-win logic:

<u>a) The case of full structural win-win conditions</u>

If the structural win-win balance is fully respected, then:

Ki = Lj = WIN! ⇒ Full structural win-win conditions

And this means that:

Ki = WIN! → Full structural win-win viability = Full structural win-win validation

<u>b) The case of partial structural win-win conditions</u>

If the structural win-win balance is partially respected, then:

Ki ≈ Lj ≈ WIN! ⇒ Conditional structural win-win viability = Partial structural win-win conditions

<u>c) The case of full structural lose-lose conditions</u>

If the structural win-win balance is fully violated, then:

Ki∩Lj∩WIN! = ∅ ⇒ Full structural win-win collapse = Full lose-lose conditions

2) The general true sustainability win-win/true sustainability lose-lose logic

The extension from true sustainability validity thinking (TSi = XYZ) to captures win-win situations (WIN!) and implications has been recently pointed out (Muñoz 2026c), and this theorem can be summarized as highlighted below:

TSi = XYZ = WIN!

And this means that:

TSi = XYZ = WIN! ⇒ True sustainability validity = True sustainability win-win conditions

And therefore:

TSi = WIN! → True sustainability win-win viability

The working of the true sustainability win-win logic

<u>a) The case of full true sustainability win-win conditions</u>

If the true sustainability win-win balance is fully respected, then:

TSi = XYZ = WIN! ⇒ Full true sustainability win-win validity

And this means that:

TSi = WIN! → Full true sustainability win-win viability

<u>b) The case of partial true sustainability win-win conditions</u>

If the true sustainability win-win balance is partially respected, then:

TSi ≈ WIN! ⇒ Conditional true sustainability win-win viability = partial true sustainability win-win viability

<u>c) The case of full true sustainability lose-lose conditions</u>

If the true sustainability win-win balance is fully violated, then:

TSi∩XYZ∩WIN! = ∅ ⇒ Full true sustainability win-win collapse = Full true sustainability lose-lose conditions.

The general true structural sustainability win-win theorem (GTSSWWT)

If structural win-win conditions (Ki = Lj = WIN!) equal true sustainability win-win conditions (TSi = XYZ = WIN!), then the following holds true:

Ki = Lj = TSi = XYZ = WIN! ⇒ General structural win-win conditions = General true sustainability win-win conditions

And this means that:

Ki = TSi = WIN! → General true structural sustainability win-win validity

And therefore:

Ki = TSi = WIN! → General true structural sustainability win-win viability

The working of the true structural sustainability win-win logic:

<u>a) The case of full general true structural sustainability win-win conditions</u>

If the general true structural sustainability win-win balance is fully respected, then:

Ki = Lj = TSi = XYZ = WIN! ⇒ General full true structural sustainability win-win validity

And this means that:

Ki = TSi = WIN! → General full true structural sustainability win-win viability = Full true structural sustainability win-win conditions

<u>b) The case of partial general true structural sustainability win-win conditions</u>

If the general true structural sustainability win-win balance is partially respected, then:

Ki ≈ Lj ≈ TSi ≈ XYZ ≈ WIN! ⇒ Conditional general true structural sustainability win-win viability = partial general true structural sustainability win-win conditions

<u>c) The case of full true structural sustainability invalidity</u>

If the general true structural sustainability win-win balance is fully violated, then:

Ki∩Lj = TSi∩XYZ = Ki∩TSi∩WIN! = Ø ⇒ Full general true structural sustainability win-win collapse = Full general true structural sustainability lose-lose conditions

In summary, the general true structural sustainability win-win theorem (GTSSWWT) can be summarized as follows:

GTSSWWT = Ki = Lj = TSi = XYZ = WIN! ⇒ General true structural sustainability win-win conditions

The universal general true structural sustainability win-win validity theorem (UGTSSWWVT)

i) The general true structural sustainability validity theorem (GTSSVT)

From related section above we have the following:

GTSSVT = Ki = Lj = TSi = XYZ ⇒ General true structural sustainability validity

ii) The general true structural sustainability win-win theorem (GTSSWWT)

From related section above we have the following:

GTSSWWT = Ki = Lj = TSi = XYZ = WIN! ⇒ General true structural sustainability win-win conditions

iii) The universal general true structural sustainability win-win validity theorem (UGTSSWWVT)

The universal general theorem that goes across domains can be determined using qualitative comparative additive linking thinking; and using qualitative comparative merging thinking as indicated below step by step:

<u>a) The case of using additive linking thinking</u>

The integration of two different theorems on the same underlying conditions leads to the universal general structural sustainability win-win validity theorem:

UGTSSWWVT = GTSSVT + GTSSWWT

So that if we vertically add what it is missing in each theorem we have:

GTSSVT = Ki = Lj = TSi = XYZ ⇒ General true structural sustainability validity

GTSSWWT = Ki = Lj = TSi = XYZ = WIN! ⇒ General true structural sustainability win-win conditions

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Ki =Lj = TSi = XYZ = WIN! ⇒ Universal General true structural sustainability win-win validity theorem

Notice that **a**dditive linking thinking relates to the vertical completion by adding the missing components.

And therefore:

Ki =Lj = TSi = XYZ = WIN! = UGTSSWWVT

The expression above tells us that when Ki = TSi = WIN! we have then universal general structural sustainability win-win validity situations (UGTSSWWVT) that apply across general domains.

<u>b) The case of using qualitative comparative linking thinking</u>

The universal general theorem can be obtained also by using qualitative comparative based merging rules to combine two different theorems on the same underlying condition as follows:

UGTSSWWVT = (GTSSVT)(GTSSWWT)

UGTSSWWVT = (Ki = Lj = TSi = XYZ)(Ki = Lj = TSi = XYZ = WIN!)

UGTSSWWVT = (Ki.Ki = Lj.Lj = TSi.TSi = XYZ.XYZ = WIN!)

UGTSSWWVT = Ki = Lj = TSi = XYZ = WIN!

The merging of components above holds true since under qualitative comparative the merging rules are as for example AA = A, Aa = Aa, aa = a, A = A, BB = B, Bb = Bb, bb = b, and B = B (details about component/paradigm merging rules can be sound in many publications on true sustainability thinking such as (Muñoz 2016) and Muñoz 2019). Notice that qualitative comparative linking thinking relates to the merging of structures that share common underlying conditions. In other words, the qualitative comparative based algebra or terminology used here such as AA = A or B = B are not being used as numerical operations, but as structural-merging operations.

And therefore:

Ki = Lj = TSi = XYZ = WIN! ⇒ Universal general true structural sustainability win-win validity conditions (UGTSSWWVT). In other words, the universal general true structural sustainability win-win validity theorem (UGTSSWWVT) tells us that it flows from the existence of true structural sustainability win-win validity conditions (TSS-WIN!) so that:

TSS-WIN! → UGTSSWWVT

Where TSS-WIN! = Ki = Lj = TSi = XYZ

And this means that now the universal general structural sustainability win-win validity balance that must be respected or violated is:

UGTSSWWVT = TSS-WIN!

And the expression above tells us that when UGTSSWWVT = TSS-WIN! we then have universal general structural sustainability win-win validity situations (UGTSSWWVT) that again apply across general domains.

The working of the universal general true structural sustainability win-win validity logic:

Again, the universal general structural sustainability win-win validity balance that needs to be respected or violated across domains is:

UGTSSWWVT = TSS-WIN! = Universal true structural sustainability win-win validation conditions

<u>a) The case of universal full true structural sustainability win-win validity conditions</u>

If the universal general structural sustainability win-win validity balance is fully respected, then:

UGTSSWWVT = TSS-WIN! ⇒ Universal full general true structural sustainability win-win validity

And this means that:

UGTSSWWVT = TSS-WIN! → Universal full general true structural sustainability win-win viability = Universal full general true structural sustainability win-win validity conditions

<u>b) The case of partial universal general true structural sustainability win-win validity conditions</u>

If the universal general structural sustainability win-win validity balance is partially respected, then:

UGTSSWWVT ≈ TSS-WIN! ⇒ Conditional universal general true structural sustainability win-win viability = partial universal general true structural sustainability win-win validity conditions

<u>c) The case of universal general full true structural sustainability win-win invalidity</u>

If the universal general structural sustainability win-win validity balance is fully violated, then:

UGTSSWWVT∩TSS-WIN! = ∅ ⇒ Universal full general true structural sustainability win-win validity collapse = Universal full general true structural sustainability lose-lose falsification conditions

In summary, the general true structural sustainability win-win validity theorem (GTSSWWVT) can be summarized as follows:

GTSSWWVT = Ki = Lj = TSi = XYZ = WIN! = TSS-WIN!

Conclusions

a) Specific

First the general viability/collapse logic was shared separately in terms of structural and true sustainability consistency conditions to point out the structure of the general structural validation theorem and of the general true sustainability validation theorem. Second, those two different validation theorems were merged to highlight the structure of the general true structural sustainability validity theorem. Third, the general win-win/ lose-lose logic was indicated separately in terms of structural and true sustainability win-win conditions to stress the structure of the general structural win-win theorem and of the general true sustainability win-win theorem. Fourth, those two different general win-win theorems were integrated to point out the structure of the general true structural sustainability win-win theorem. Fifth, the general true structural sustainability validity theorem and the general true structural sustainability win-win theorem were combined using both additive qualitative comparative thinking and merging qualitative comparative thinking to arrive using two different ways to the same universal general true structural sustainability win-win validation theorem. In other words it was shown that separate structural and sustainability results can be integrated through qualitative comparative and additive linking processes to generate a universal true structural sustainability win-win validity theorem applicable across domains.

b) General

i) It was shown that the combination of independent general falsification theorems can be merged and lead to the statement of the general true structural sustainability validity theorem, of the general true structural sustainability win-win theorem and of the universal general true structural sustainability win-win validity theorem; ii) It was demonstrated that it is possible to use qualitative comparative additive paradigm linking thinking and qualitative comparative merging paradigm thinking as tools for extending and integrating theoretical frameworks; iii) It can be seen that the methodology across the paper uses tools such as separate development,

comparative analysis, theorem merging, additive linking, and qualitative comparative integration; and therefore, iv) The paper provides a general procedure for extending and integrating structural sustainability theories across domains.

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