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REVIEWER'S REPORT

Manuscript No.: IJAR-55269

Title: Unifying Inflation–Dark Energy through Scalar Field and Quadratic Teleparallel Model Constrained by Observational Data

Recommendation:

Accept after major revision

Rating	Excel.	Good	Fair	Poor
Originality	✓			
Techn. Quality		✓		
Clarity			✓	
Significance		✓		

Reviewer Name: Dr. Zainuddin

Reviewer's Comment for Publication

In general, this manuscript addresses an important and relevant topic in cosmological studies, particularly concerning the unification of the inflationary phase and dark energy within a modified gravity framework. The study demonstrates adequate mastery of the theoretical and mathematical aspects; however, improvements are still needed in terms of clarity of writing, consistency of terminology and notation, and strengthening the explanation and interpretation of the results in order to meet the standards of a reputable journal.

Detailed Reviewer's Report

1. **Clarity of Objectives and Novelty**

   The manuscript would benefit from a clearer statement of its main novelty in the Introduction. While the unification of inflation and dark energy in modified gravity has been widely studied, the authors should explicitly clarify what is *new* in comparison with existing works on quadratic (f(T)) gravity with scalar fields (e.g., differences in methodology, parameter constraints, or phenomenological implications).

2. **Language and Readability**

   The paper contains numerous grammatical errors, awkward expressions, and typographical mistakes that significantly reduce readability. For a Scopus-level journal, the manuscript must undergo thorough English language editing by a professional or a fluent academic editor.

3. **Methodological Transparency**

   The separation-of-functions method and the assumptions leading to Eq. (19) should be explained more carefully. The physical motivation behind setting the separation constant (c) and the implications of choosing specific parameter values (e.g., (\lambda > 0), (c > 0)) need to be justified more explicitly.

4. **Consistency of Notation**

   There are several inconsistencies in notation (e.g., switching between (H(t)), (H(N)), (H(z)); inconsistent labeling of equations and figures; typographical issues in equations). All symbols should be clearly defined once and used consistently throughout the manuscript.

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5. **Observational Constraints and Data Usage**

   Although Planck and BICEP2 data are cited, the comparison remains mostly qualitative. The authors are encouraged to clarify whether a statistical fitting procedure was performed or whether the agreement is purely illustrative. If no statistical analysis is carried out, this limitation should be clearly stated.

6. **Figures and Tables**

   The quality of figures should be improved. Axes labels, units, legends, and captions need to be clearer and more informative. Table 1 should explicitly state the parameter values used and explain how the listed numerical values were extracted from the plots.

7. **Discussion and Physical Interpretation**

   The discussion section should be strengthened by providing deeper physical interpretations of the results, especially regarding the effective (\Lambda)CDM-like behavior at late times. A more critical comparison with other dark energy and inflationary models in modified gravity is recommended.