

DOI: 10.5281/zenodo.12426776

# EQUATION CONSTANCY AND CALIBRATION VARIABILITY: A COMPARATIVE MODEL OF DRIVE AND WILL IN REVOLUTIONS

Osama M. Abu Nahel<sup>1\*</sup>, Dr. Shadi Samir Ewaida<sup>2</sup>

<sup>1</sup>Professor of Middle Eastern Studies, Al-Azhar University - Gaza (Palestine).  
ORCID iD: <https://orcid.org/0000-0003-0154-7908>, Email: [osamabunahel@hotmail.com](mailto:osamabunahel@hotmail.com)

<sup>2</sup>Associate Professor in Political Science, University of Palestine.  
ORCID iD: <https://orcid.org/0009-0002-9044-0001>, Email: [s.ewida@up.edu.ps](mailto:s.ewida@up.edu.ps)

Received: 27/12/2025

Accepted: 18/02/2026

Corresponding Author: Osama M. Abu Nahel  
([osamabunahel@hotmail.com](mailto:osamabunahel@hotmail.com))

## ABSTRACT

*This study introduces a developed mathematical-analytical model to evaluate revolutionary outcomes through the equation:  $R = (\text{Drive} \times \text{Will}) + \text{Context}$ . Transitioning from descriptive narratives to a precise "calibration tool," the research redefines "Will" (W) as a composite variable encompassing "Political Maneuvering" and strategic negotiation with hard institutions (the military), while operationalizing "Context" (C) as a numerical impact factor. Through a comparative analysis of Vietnam, Iran, Egypt, and the Philippines, the findings demonstrate that "Smart Calibration" of political will is the primary determinant of sustainable change. The results reveal that the Egyptian case (0.94) failed to reach the success threshold due to a deficit in political maneuvering despite a high "Drive" (D). Conversely, the Philippines (1.28) achieved rapid success through positive context calibration. The study concludes by providing a Predictive Matrix with established measurement thresholds, transforming the model into a strategic compass for forecasting the trajectories of contemporary protest movements. This framework enables policymakers to estimate success probabilities based on the dynamic interaction between popular momentum and structural constraints.*

---

**KEYWORDS:** Revolution, Mathematical Model, Organizational Will, Political Maneuvering, Calibration, International Context, Prospective Analysis.

---

## INTRODUCTION

Drive and will are fundamental concepts for understanding the nature of human action, whether at the individual or collective level. Global political history is not merely a sequence of events or decisions, but rather a manifestation of the inner energy that motivates peoples and individuals toward change, resistance, or construction. Recognizing the role of drive and will thus provides a deeper interpretation of the sources of political and revolutionary behavior during major historical periods.

This study begins from the assumption that the mathematical equation linking drive, will, and context remains constant across different revolutions, while the weight of each element varies according to the historical specificity of each case. By comparing four distinct revolutionary experiences—Vietnam (1954–1975), Iran (1979), Egypt (2011), and the Philippines (1986)—the model demonstrates that success, failure, or partial success is not attributed to the structure of the equation itself, but rather to the calibration of its elements in relation to the political and social context of each experience.

### ➤ Significance of the Study

This study is part of renewed efforts to understand the dynamics of revolutions through a comparative framework that integrates Drive, Will, and Context. Classical literature, from Brinton (1965) to Skocpol (1979), has demonstrated that comparative analysis is the most effective and enriching approach to understanding revolutions. However, most of these studies have focused primarily on social structures or the state. In contrast, the present study seeks to introduce a stable mathematical-conceptual equation, adaptable to the specificity of each case, thereby enabling the model to be used both in comparative research and teaching.

### ➤ Study Problem and Questions

The study addresses the problem of the limitations of structural theories that explain revolutions exclusively through objective conditions such as authoritarianism and poverty, despite the persistence of these conditions in cases that witnessed no mobilization or produced divergent outcomes. It seeks to move beyond this static interpretation by assuming that the decisive factor lies in differences of “calibration,” namely, the dynamics of drive and will, and how actors manage the structural equation and transform it

from a latent condition into revolutionary action. From this perspective emerges the central question: *to what extent does the variation in the calibration of will and drive explain the differing outcomes of revolutions despite the stability of political and economic conditions?*

This question leads to several sub-questions:

1. Does the equation linking drive, will, and context remain constant across different revolutions?
2. How does the calibration of the model's parameters differ between cases of complete success (Vietnam, Iran), partial success bordering on failure (Egypt), and rapid success (Philippines)?
3. What are the limits of the model's ability to explain revolutions in non-traditional contexts, such as long-term transformation?

### ➤ Study Objectives

The study aims to achieve the following objectives:

1. To establish a mathematical-conceptual framework that links drive, will, and context in explaining revolutions.
2. To test the model through four diverse cases: Vietnam, Iran, Egypt, and the Philippines.
3. To highlight the flexibility of the model in distinguishing between success, failure, and partial success.
4. To pave the way for future applications in teaching political history and in global comparative Studies.

### ➤ Hypotheses

#### 1. Null Hypothesis (H0)

There is no significant relationship between variations in the calibration of drive and will and the outcomes of revolutions; the outcomes are explained solely by stable structural conditions.

#### 2. Alternative Hypothesis (H1):

Differences in the calibration of drive and will lead to fundamental variation in the outcomes of revolutions, regardless of the stability of structural conditions.

- a. **Sub-Hypothesis (H1-a):** There is a positive correlation between the resilience of will after repression and the likelihood of revolutionary success.
- b. **Sub-Hypothesis (H1-b):** The rapid evolution of demands and the diversification of protest tools constitute a more accurate indicator of revolutionary success than economic deprivation.

## LITERATURE REVIEW

In the case of the Iranian Revolution (1979), Keddie & Richard (1981) highlighted the role of the religious establishment. Classical studies such as Brinton (1965), Skocpol (1979), and Tilly (1978) emphasized social structure and the state as decisive factors in revolutions, while more recent literature underscored the role of actors and social movements.

For the Vietnamese Revolution (1954–1975), Marr (1971) examined the evolution of nationalist thought, Kollo (1985) focused on the military and international structure, and Duiker (2000) emphasized charismatic leadership. Abrahamian (1982), meanwhile, analyzed structural transformations without a clear distinction between drive and will.

Regarding the Egyptian uprising (2011–2013), the literature concentrated on the role of youth and technology (Howard & Hussain, 2013), the military establishment (Sayigh, 2012), and the weakness of civil forces (El-Ghobashy, 2012; Brownlee et al., 2015).

### → Research Gap Addressed by the Current Study

The existing literature demonstrates richness in analysis but has remained largely descriptive or confined to local contexts. The present study seeks to overcome this limitation by formulating a mathematical–conceptual equation that is both calibratable and comparable. Accordingly, the equation functions as a dual tool: explanatory, for understanding the divergence of revolutionary outcomes, and pedagogical, for training researchers and students in comparative analysis of revolutions.

Contemporary social movement literature validates the methodological soundness of this study's model. McAdam, Tarrow, & Tilly show that revolutionary outcomes hinge on mobilizing structures, political opportunities, and framing processes—dimensions that correspond to Drive, Will, and Context. McAdam et al. (2001) highlight the decisive role of political opportunities, justifying the inclusion of Context. Della Porta & Diani (2006) stress organizational capacity and collective identity, aligning with Will as the mechanism for sustaining action. Snow & Benford (1988) confirm that unified ideological frames enhance mobilization, consistent with the calibration of Drive in cases like Iran and Vietnam. Integrating these insights reinforces the analytical foundation and credibility of the model's quantitative findings.

## THEORETICAL FRAMEWORK

This study aims to move beyond the traditional narrative approach to the analysis of revolutions by

presenting a comparative model that connects three fundamental elements. Nietzsche emphasizes that man is “a willing being before he is a rational being” (Nietzsche, 1967: 89). From this perspective, the importance of reconciling drive and will becomes evident in understanding the relationship between individual consciousness and collective decision-making in political transformations.

### 1. Concept of Drive

Drive is the internal force that motivates an individual to act to meet a need or achieve a goal (Kuhl, 1987). Drives are divided into intrinsic drives, related to personal conviction such as faith, belonging, and moral duty, and extrinsic drives, linked to material and social factors such as reward, punishment, or recognition. Weber emphasizes that drive is the foundation of any meaningful social action, as behavior cannot be rational or historical unless it is based on a specific drive (Weber, 1978). In historical analysis, drive is considered a latent energy that transforms into collective behavior when shared will is present.

### 2. Concept of Will

Will is the capacity to make a deliberate decision and to carry out an action despite obstacles. It represents the moment when an idea is transformed into action, thereby shaping the course of history. Frankl argues that the pursuit of meaning is the fundamental drive of existence and that its absence leads to the deterioration of political and moral action (Frankl, 1984). Sartre, on the other hand, considers will to be the embodiment of freedom, asserting that an act can only be moral or historical if it arises from a conscious free choice (Sartre, 1956). Thus, will is regarded as the essential foundation of drive, granting it direction and effectiveness in reality.

Understanding the relationship between drive and will opens new horizons for interpreting political and historical behavior, restoring to human beings their position as intentional actors rather than mere elements within equations of power. The mathematical equation introduced in this study allows for applied analysis in prominent cases:

- a. The Vietnamese struggle and the Iranian Revolution: examples of the interaction between ideological drive and political will in achieving historical change.
- b. The Egyptian popular uprising: a partially successful revolutionary model closer to failure, due to the absence of linkage between revolutionary drive and collective will.

c. The Philippine Revolution: a case of rapid success.

### 3. Concept of Context

Context is the framework or environment that defines the conditions and factors surrounding an event, idea, or action, thereby granting it meaning and explaining its significance. In academic research, context is used to clarify the theoretical and practical background within which the subject of study is situated, including the social, cultural, historical, or environmental conditions that influence both outcomes and their interpretation (Maxwell, 2012; Merriam & Tisdell, 2016).

In this model, Context (C) is defined as the totality

of surrounding circumstances over which revolutionary actors lack full control. This developed version of the study shifts the perception of 'Context' from a static descriptive variable to a 'dynamic coefficient' measured through a three-dimensional matrix (international, structural, and geopolitical). This evolution explains how Context functions as an 'Accelerator' for revolutionary success when values are positive, or as an 'Inhibitor' that absorbs the energy of both Drive and Will when values are negative. Consequently, the equation becomes capable of explaining the variance in outcomes, even in cases where levels of popular grievance are similar.

**Table 1: Enhanced Calibration Matrix of Revolutionary Variables (Comparative Analysis of Egypt and the Philippines).**

Calibration Criteria	Egyptian Case (2011)	Philippine Case (1986)	Impact of Calibration on Outcome (R)
Political Maneuvering ( $W_p$ )	Low (Absence of negotiation channels)	High (Defection/Alignment of military leadership)	Erosion of 'Will' in Egypt vs. its consolidation in the Philippines
International Context ( $C_i$ )	Turbulent/Obstructive (Regional reservations)	Positive/Facilitating (Withdrawal of U.S. support for the regime)	Context as an 'Inhibitor' in Egypt vs. an 'Accelerator' in the Philippines
Ideological Cohesion ( $W_i$ )	Fragile (Secular/Islamist polarization)	High (Unified goal of ousting the dictatorship)	Forces offset the gains of the fragmentation of the revolutionary 'Drive'
Final Outcome (R)	0.94 (Partial Success/Stalemate)	1.28 (Decisive Success)	Variance in 'Calibration' despite similar 'Drive' levels

#### Analytical Commentary:

It is inferred from the table above that the numerical variance in the outcomes (R) between the two cases does not stem from a difference in grassroots momentum or 'Drive', but rather from the fundamental disparity in the 'Calibration of Political Will' and the management of the surrounding 'Context'. While the Philippine case succeeded in transforming the military establishment and the international environment into 'levers' for revolutionary action, the absence of political maneuvering in the Egyptian case turned these same elements into 'structural inhibitors'. Consequently, the table validates the study's developed hypothesis: that "political negotiation capacity" is not a secondary option, but rather the decisive coefficient that determines whether a revolution will lead to structural change or remain confined to superficial transitions.

### METHODOLOGY AND THE ADOPTED MATHEMATICAL EQUATION

This study is grounded in both classical methodologies and contemporary analytical approaches, while innovating a new formula to reconcile the two:

#### 1. Comparative Historical Method

This method has proven to be the most fruitful approach for understanding revolutions (Skocpol, 1979; Brinton, 1965). It aims to analyze phenomena through comparison between two or more cases, to infer causal and patterned relationships (Przeworski and Teune, 1970). It relies on tools such as process-tracing and path analysis (Skocpol & Somers, 1980; Tilly, 1978).

#### 2. Synthetic-Analytical Method

The study also draws on the synthetic-analytical method in developing its model. This dual approach begins by deconstructing the phenomenon into its basic components (analysis), and then reassembling them into an integrated model or theory (synthesis) (de Jong,

#### 3. Mathematical Model and Contemporary Approach

This study falls within the modern methodology known as the Formalized Comparative Historical Method (Gaertner, 2009) or the Interpretive Structural Method (Waltz, 1979). This approach seeks to combine the strength of historical narrative with the rigor and precision of analytical models. The use

of a mathematical model is justified by its ability to transform qualitative concepts, such as drive and will, into measurable variables that can be compared across different cases. Mathematical modeling in political science also reduces conceptual ambiguity and facilitates comparison between revolutions and states (Riba, 1996).

#### 4. Political Opportunity and Rational Choice Theories

Political opportunity theories focus on calculations of gains and losses (calibration), addressing the organization of social movements, mobilization, and the cost-benefit analysis of individuals, namely, whether the cost of revolution is lower than remaining under authoritarian rule. In this context, will emerges as grounded in rational calculations (Olson, 1965).

#### General Equation of the Study

Building on these methodologies and integrating the mathematical-analytical approach, the model adopted in this study is based on the following equation, which incorporates Sartre's (1956) conception of will and the capacity to transform freedom into collective action:

$$R = (\text{Drive } (D) \times \text{Will } (W)) + \text{Context } (C)$$

Or, in a more formalized scientific notation:

$$R = (D' \times W') + \sum \omega C$$

Where:

- R: Revolutionary outcome (success, failure, partial success).
- D': Normalized Drive.
- W': Normalized Will.
- $\sum \omega C$ : The sum of different contexts (political, economic, cultural), each multiplied by its relative weight ( $\omega$ ).

Accordingly, drive is defined as the internal energy (intrinsic or extrinsic), will as the capacity to transform an idea into collective action, and context as the surrounding political-social environment. The concept of calibration (Babbie, 2020) is defined as the collective intelligence that enables actors to adjust their tools and will in response to changing costs and

opportunities. Operationally, it is measured through the participation curve following repression and the diversification of protest tools. In this way, the model combines the strength of historical narrative with the precision of mathematical modeling, allowing qualitative concepts to be transformed into measurable variables that can be compared across different cases.

#### 1. Justification for Adopting the Additive Formula

The researchers initially attempted to formulate context as a multiplicative factor ( $\times$ ) rather than an additive one ( $+$ ), but the study ultimately adopted the current formula for several methodological reasons. First, this formulation allows context to be considered as either a supportive or obstructive factor without nullifying the effect of drive and will if negative, or disproportionately amplifying them if positive. Second, the additive approach preserves the balance between structure and agency; drive and will remain the primary engines, while context is introduced as an independent variable that raises or lowers the outcome. Third, this formula avoids numerical contraction that could result from multiplication, especially when values are less than one, thereby ensuring that results remain within a clear interpretive range and are comparable across different cases. Finally, retaining the additive formulation reflects the study's aim of presenting a mathematically and analytically robust yet simplified model, one that is accessible for academic analysis and teaching without excessive mathematical complexity.

Overall, the equation in its current form is distinguished by the following:

- a. It renders motivation and will as a multiplicative relationship; if either of them is zero, the internal outcome becomes zero. This aligns with revolutionary logic (motivation without will = mob rule; will without motivation = elitist coup).
- b. It renders context as additive, meaning that a negative context can undermine the revolution (reduce its value) but does not completely nullify its existence.

*Table 2: Nature of the relationship between the elements of the equation.*

Element	Mathematical Formulation	Revolutionary Interpretation
Drive $\times$ Will	Multiplicative relationship	If either is zero, the outcome is null; Drive without will = mob rule, will without Drive = elitist coup
Context + (Additive)	Additive relationship	Negative context reduces revolutionary value but does not nullify its existence

The table demonstrates that the revolutionary equation combines multiplicative logic in the internal relation (Drive  $\times$  will), where the absence of either

nullifies effectiveness, with additive logic in the external context, where negative factors may weaken but not entirely abolish the revolution.

**Table 3: Measurement Indicators.**

Concept	Definition	Operational Indicator	Measurement Tool
<b>Drive</b>	The internal energy (intrinsic or extrinsic) that motivates the individual to act (Kuhl, 1987)	Level of popular participation after repression	Participation Curve
<b>Will</b>	The capacity to transform an idea into collective action despite obstacles (Sartre, 1956; Frankl, 1984)	Ability to persist and organize after repression	Protest Tools Diversity Index
<b>Context</b>	The surrounding political-social environment (Maxwell, 2012; Merriam and Tisdell, 2016)	Structural conditions (political, economic, cultural)	Quantitative/qualitative indicators with relative weights (Weighted Context Variables)
<b>Calibration</b>	Collective intelligence enabling actors to adjust tools and will according to changing costs and opportunities (Babbie, 2020)	Interaction between participation and protest tools	Mathematical-conceptual equation



*Figure 1: The visual diagram illustrating the relationship among the three elements.*

To shift the model from qualitative estimation to standardized measurement, this developed study proposes decomposing the 'Will' (W) variable into a five-dimensional matrix. This refinement enables researchers to compare revolutionary cases with greater precision. While the Egyptian case recorded a high degree of 'Drive' (D), it faltered in 'Unified Leadership' and 'Ideological Cohesion,' which progressively led to a decline in the value of 'Will' (W) within the equation, ultimately resulting in the erosion of the outcome (R).

**1. Normalization and Calibration Methodology**

Qualitative indicators, such as the intensity of popular anger or the level of organization, are transformed into numerical values ranging between 0 and 1. The weights of context ( $\omega$ ) are determined according to the importance of each factor in the studied case, for example, the role of the military in

Egypt or the role of the Church in the Philippines. These values are then used to produce a quantitative outcome that is comparable across different cases.

**2. Operationalization of Variables and Calibration Standards in the Model**

Operationalization is defined as the systematic process of transforming abstract theoretical concepts into dimensions and indicators that can be observed and empirically measured. Its importance lies in bridging the gap between theoretical abstraction and practical measurement by establishing clear procedures for data collection that ensure accuracy and replicability in the context of revolutions (Babbie, 2020).

The following table aims to identify the qualitative indicators used to assign numerical values to each independent variable (drive, will, context) on a hypothetical scale (e.g., from 0 to 1).

**Table 4: Definition of Indicators and Measurement Standards.**

Independent Variable	Qualitative Indicators for Measurement	Hypothetical Range	Case Example
Drive (D)	a. Depth of Crisis (Economic, Social, Political)	(0.00 – 0.35)	a. Egypt (2011–2013): severe economic crisis and political repression fueled mass anger.
	b. Inclusivity of Participation (Breadth of social groups and forces)	(0.00 – 0.35)	b. Vietnam (1954–1975): broad participation across peasants, workers, and nationalist groups.
	c. Clarity of Goals and Unified Ideology	(0.00 – 0.30)	c. Iran (1979): unified ideological demand under Islamic revolutionary leadership.
Will (W)	a. Presence of Centralized and Unified Leadership (Political Umbrella)	(0.00 – 0.40)	a. Iran (1979): Khomeini provided centralized leadership.
	b. Capacity for Operational and Field Mobilization/Organization	(0.00 – 0.30)	b. Vietnam (1954–1975): Viet Minh organized military and civilian mobilization.
	c. <b>Political Maneuvering and Strategic Negotiation Capacity</b>	(0.00 – 0.30)	c. Philippines (1986): strategic nonviolent protests led to rapid success.
Context (C)	a. Status of the Military Establishment (Defection, Neutrality, or Oppression)	(0.00 – 0.40)	a. Philippines (1986): military defection weakened the Marcos regime.
	b. International and Regional Support or Neutrality	(0.0 – 0.30)	b. Egypt (2011–2013): regional actors remained divided, limiting external support.
	c. Cohesion or Fragmentation of the Ruling Elite (Structural Liquidity)	(0.00 – 0.30)	c. Iran (1979): Shah's regime weakened by economic crisis and health issues

The maximum total (1.00) applies to each variable (Drive / Will / Context).

This table serves as the reference framework for the 'Digital Calibration' process in this study, where relative weights are assigned to each indicator based on its geopolitical and historical significance in tipping the balance of revolutionary action. The importance of this classification lies in its ability to explain the 'Structural Imbalance' in certain revolutions. For instance, a case that records a high score in 'Drive' (0.90) but fails in

'Political Maneuvering' within the 'Will' variable (0.20) will inevitably lead to a diminished overall outcome. Thus, this matrix provides an analytical tool that transcends general description, offering researchers disciplined criteria to measure success probabilities or forecast trajectories of failure based on field data.

The following table links the numerical range (from 0.0 to 1.0) to the appropriate narrative vocabulary:

**Table 5: Linguistic and Quantitative Calibration Matrix for Describing Revolutionary Variables**

Numeric Range	Strength Level	Suggested Vocabulary
0.90-1.00	Maximum / Absolute	Absolute, unwavering, unbreakable, decisive, exceptional, irresistible momentum, structural consensus
0.80-0.89	High Strength	Strong, solid, cohesive, prominent, continuous, noticeable, organizational maturity
0.60-0.79	Moderate Strength	Moderate, conditional, situational, limited, fluctuating, seasonal mobilization
Below 0.60	Weakness / Fragility	Fragile, fractured, insufficient, receding, collapsing, weak-willed, tactical confusion

### Analytical Commentary:

The Linguistic Calibration Table serves as the "interpretive ruler" that bridges qualitative analysis (words) and quantitative analysis (numbers) within this model. This matrix aims to eliminate ambiguity in the numerical estimation of variables. For instance, when the "Will" in the Egyptian case is described as "fractured" or "fragile," it is immediately translated into a numerical value below (0.60) in the equation. Consequently, this ensures the highest levels of

objectivity and transparency in the measurement process, allowing other researchers to re-test the model on different cases using the same disciplined linguistic and numerical standards.

### 3. Coding of the Indicator Scale

- a. 0.0: Clear lead-ins.
- b. 0.2: Weak.
- c. 0.5: Moderate.
- d. 0.8: Strong.

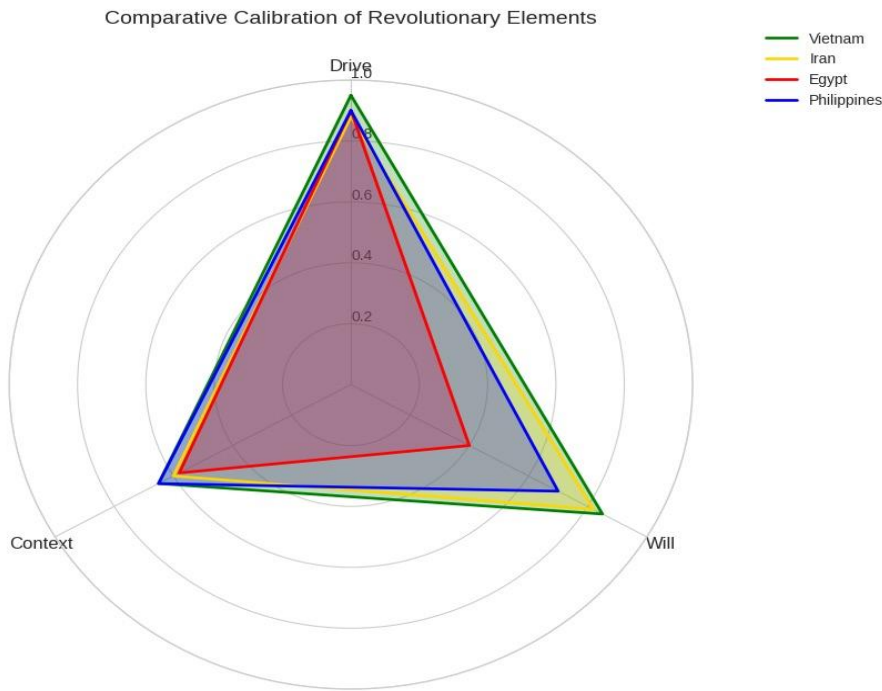
**Table 6: Numerical and Analytical Calibration Matrix for Comparative Case Studies**

Case	Drive Weight	Will Weight	Interaction Weight	Context Weight $\Sigma\omega$	Note
Vietnam	0.35	0.35	0.30	$\leq 0.20$	Long-term mobilization; perfect balance between Drive and Will; supportive geopolitical context
Iran	0.30	0.30	0.40	$\leq 0.25$	Strong organizational interaction (the Mosque network); the urban context facilitated the collapse of the elite
Egypt	0.40	0.25	0.35	$\leq 0.15$	An immensely popular drive accompanied by <i>fragmented will</i> (weak political maneuvering); obstructive context (military cohesion)
Philippines	0.30	0.30	0.30	$\leq 0.25$	Decisive success; <i>smart will</i> succeeded in neutralizing the military; highly supportive international and ecclesiastical context

**Analytical Commentary:**

The table above illustrates how calibration dictates the direction of revolutionary energy toward either success or stalemate. While the Egyptian case recorded the highest weight for *Drive* (0.40), the decline in the weights of *Will* and *Context* led to a drop in the overall result. In contrast, the Philippine case, despite its balanced weights, derived its

strength from the “positive calibration” of context and the high capacity of the will to maneuver, which raised its total value. This numerical comparison confirms that a revolution is not merely an “explosion of anger” (D), but rather a process of “smart management” (W) of available resources and contextual opportunities (C). This explains why certain cases achieved decisive success despite their short durations.



**Figure 2: Comparative Calibration of Revolutionary Elements in Cases <sup>(1)</sup>.**

**4. Interpretation**

- a. Equation stability: The mathematical form of the equation did not change across the cases.
- b. Variation in calibration: Each case demonstrates a different weighting of the elements:

- Vietnam: A classical balance between drive and will.
- Iran: Emphasis on complex interaction.
- Egypt: Highlighting weak organizational will despite strong drive.

<sup>1</sup>- The radar chart provides a systematic comparison of the three revolutionary elements (Drive, Will, Context) across four historical cases. Vietnam and Iran display near-complete balance across the axes, while the Philippines appears balanced but relatively smaller in scale. Egypt, however, despite possessing a strong Drive and a moderate Context, shows a sharp collapse on the Will axis, visually demonstrating the structural weakness that explains its revolutionary failure compared to the other cases.

- Philippines: Emphasis on the role of context as a decisive factor in partial success.

### 5. Reading the Results

- a. Vietnam: Nearly the highest point (Drive 0.95, Will 0.85), medium circle → a long-term successful revolution.
- b. Iran: Very close to Vietnam but with a larger circle (stronger context) → a rapid and decisive revolution.
- c. Egypt: Strong drive (0.90) but low will (0.40), small circle → partial transformation success, closer to failure despite mass mobilization.
- d. Philippines: Strong drive (0.90) and medium will (0.70), relatively large circle → partial success due to context (army division, role of the Church).

### 6. Justification for Using the Mathematical Model in the Study of Political History

The use of a mathematical model in the study of political history is attributed to its ability to transform qualitative concepts—such as drive, will, and context—into measurable variables that can be compared across multiple cases. While classical literature relied on historical narrative or structural analysis, the introduction of mathematics adds an element of scientific rigor and facilitates the repeated and systematic testing of hypotheses. Mathematical modeling in political science also contributes to reducing conceptual ambiguity and provides tools for generalization across contexts (Johnson, 1989).

Furthermore, the trend toward applying mathematics in political science aims to facilitate comparison between revolutions and states rather than relying solely on descriptive analysis (Riba, 1996). Mathematics also helps to transform political concepts into equations applicable to real data, making it both an explanatory and pedagogical tool (Aragón-Artacho and Goberna, 2024). Nevertheless, the mathematical model does not exclude historical narrative; rather, it reinforces it, since equations still require historical contextualization to comprehensively understand revolutionary trajectories (Goldstone, 2003).

### THE VIETNAMESE STRUGGLE (1954–1975) ACCORDING TO THE MODEL (DRIVE × WILL + CONTEXT)

The Vietnamese struggle represents a comprehensive revolutionary model that combined a deep popular drive rooted in dignity and independence, with strict organizational will manifested in nationalist and Marxist movements, alongside a favorable local–international context.

This balance led to the success of the revolution and the unification of the country in 1975, despite successive French colonialism, Japanese occupation, and American intervention. Decades of occupation nourished a collective memory resistant to domination, while rural culture and a spirit of sacrifice reinforced the population's readiness for resistance (Marr, 1971).

#### 1. Drive for Struggle (Drive): Raw Internal Energy

The revolutionary drive of the Vietnamese people can be summarized in the following points:

- a. The Vietnamese struggle embodied a profound desire for national liberation from French colonialism and later American hegemony, supported by a cultural legacy of resistance against Chinese domination for more than a thousand years, and a rejection of economic and political exploitation during the French era. This long occupation established a collective memory opposed to foreign domination, making liberation a moral and existential duty. With the French withdrawal, nationalist and Marxist movements converged around the goal of independence, while rural culture and a spirit of sacrifice reinforced the population's readiness for resistance (Marr, 1971; Bista, Educba.com).
- b. Vietnamese national identity further strengthened the drive for liberation, especially after the failure of colonial modernization attempts that ignored cultural specificity. This deepened the sense of national belonging and reaffirmed resistance to external domination (Taylor, 1983; *The Vietnamese Revolution*, University of Colorado Pressbooks).

→ **Drive Evaluation (D')**: The drive for the Vietnamese revolution is assessed as very high (0.95 out of 1), due to the entrenched national identity and the accumulation of historical grievances.

#### 2. Will (Organizational Capacity):

The will in the Vietnamese struggle can be summarized as follows:

- a. Ho Chi Minh emerged as a national leader capable of transforming popular drive into practical will. He led the Viet Minh movement with strict organizational discipline inspired by Mao's theory of people's war, relying on the countryside as a strategic base. He framed the concept of comprehensive liberation as a sacred national duty, combining Marxist ideological motivation with independent national will, thus granting the liberation movement dual energy: ideological and

national (Duiker, 2000). Figures such as General Võ Nguyên Giáp also played a crucial organizational role in transforming intent into military strategy (Giáp, 1961).

- b. The Vietnamese leadership possessed the ability to mobilize the masses, organize militarily, and manage international alliances with China and the Soviet Union (Millen, 2008; Kolko, 1985).
- c. Political discourse was harmoniously integrated with military action, reinforcing revolutionary will.

→ **Will Evaluation (W')**: The will is assessed as very high (0.85 out of 1), due to organizational discipline and charismatic leadership.

### 3. Context (Political and Social Environment):

The context in the Vietnamese case can be summarized as follows:

- a. The revolution benefited from international division after World War II, with China and the Soviet Union supporting North Vietnam, while the United States backed the South (Kolko, 1985; Bista, Educba.com).
- b. The rugged geography (mountains and forests) facilitated guerrilla warfare, while rural agriculture provided a social base for resistance (Vietnamese Revolution, University of Colorado Pressbooks).
- c. The failure of French colonialism to establish legitimate institutions, along with the collapse of the U.S.-backed regime in the South, created a political vacuum exploited by the revolution.

→ **Context Evaluation ( $\sum \omega C$ )**: The context is assessed as highly positive, with an approximate weight of 0.65, distributed among geography, international support, and regime weakness.

### 4. Equation Application:

$$R = (0.95 \times 0.85) + 0.65 = 1.4575$$

→ **Final Result (R)**:

The Vietnamese revolution is considered a highly successful model, as the value exceeded 1.4, indicating the completeness of the equation's elements. It integrated deep national drive, strict organizational will, and a favorable local-international context, making it a reference case for understanding successful revolutions. This experience confirms that precise calibration of the three factors is the decisive condition in determining revolutionary outcomes, and that the success of the Vietnamese revolution reflects the ideal balance between structure, agency, and context.

## THE IRANIAN REVOLUTION (1979), ACCORDING TO THE MODEL (DRIVE × WILL + CONTEXT)

The Islamic Revolution in Iran represents one of the most prominent revolutions of the twentieth century, embodying the convergence of ideological drive with collective will to overthrow a secular political regime supported by Western powers (Arjomand, 1988). This revolution was a historical moment in which religious doctrine interacted with political consciousness, forming a model of what may be termed the ideological will of history—a will deriving its legitimacy from a deeply rooted system of religious and cultural values.

Applying the equation reveals that the success of the revolution stemmed from the interaction of a strong popular-religious drive, organizational will led by clerics, and an internal-external context that facilitated the eruption of the crisis.

### 1. Drive of the Revolution: Popular Anger

The revolutionary drive among the Iranian people can be summarized in the following points:

- a. The primary drive of the Iranian Revolution was popular anger against authoritarianism and economic corruption, in addition to the rejection of cultural Westernization and the policies of Shah Muhammad Reza Pahlavi (Keddie & Richard, 1981; Abrahamian, 1982).
- b. The religious factor played a pivotal role in fueling the drive, as political Islam provided a unifying framework for popular identity (Khomeini, 2009; Arjomand, 1988; Kurzman, 2005).

→ **Drive Evaluation (D')**: The drive of the Iranian Revolution is assessed at a very high level (0.88).

### 2. Will: Charismatic Leadership

The will in the Iranian Revolution can be summarized in the following points:

- a. Imam Khomeini possessed exceptional charisma, enabling him to merge the ideological drive with collective will and transform religious discourse into a revolutionary political project. One scholar described him as a “symbolic leader who redefined the relationship between religion and state” (Arjomand, 1988). Khomeini led the revolutionary movement from exile through recorded speeches and mosque networks (Khomeini, 2009).
- b. Organizational will was embodied in the clerics' ability to mobilize the masses and connect daily protests with a unified religious-political discourse.

c. Despite the absence of a centralized political party, religious networks functioned as the revolutionary party (Khomeini, 2008; Keddie & Richard, 1981; Kurzman, 2005).

→ **Will Evaluation (W')**: The will of the Iranian Revolution is assessed at a high level (0.82).

### 3. Context: Internal and External Environment

The context in the Iranian case can be outlined as follows:

a. The economic crisis of the 1970s, marked by rising unemployment and inflation, undermined the legitimacy of the Shah's regime (Kurzman, 2005).

b. Excessive political repression by the SAVAK security apparatus generated widespread public resentment (Khomeini, 2008).

c. International support was inconsistent: although the United States backed the Shah, Western human rights pressures contributed to weakening his position (Abrahamian, 1982).

d. The religious-cultural identity provided a powerful mobilizing framework that accelerated the pace of the revolution (Moaddel, 1993).

→ **Context Evaluation ( $\sum\omega C$ )**: The context of the Iranian Revolution is assessed as positive (0.60).

### 4. Equation Application:

$$R = (0.88 \times 0.82) = 0.7216 + 0.60 = 1.3216$$

→ **Final Result (R)**:

The Iranian Revolution is considered successful, as the value exceeded 1.3216, indicating a strong balance between drive, will, and context.

### THE EGYPTIAN UPRISING (2011-2013), ACCORDING TO THE MODEL (DRIVE × WILL + CONTEXT)

The Egyptian uprising began on January 25, 2011, as a result of accumulated repression, corruption, and lack of social justice, following the death of the young man Khaled Said before the outbreak of the movement (Hamarnah, Apr 2001; Abu Nahel, 2013). Between 2011 and 2013, this uprising represented a complex revolutionary case: it succeeded in overthrowing President Hosni Mubarak's regime, yet faced significant challenges in building a stable alternative system.

Applying the equation shows that the popular drive was strong, but organizational will was divided, while the political-military context played a decisive role in reshaping the outcomes.

#### 1. Drive (Popular Anger)

The revolutionary drive among the Egyptian people can be summarized as follows:

a. The primary drive of the Egyptian uprising was popular anger against corruption, authoritarianism, and unemployment, in addition to the influence of the wave of Arab uprisings contemporaneous with the Egyptian case (Hamarnah, Apr 2001; Kandil, 2012).

b. The crowds in Tahrir Square in Cairo embodied this drive, as millions of Egyptians gathered demanding freedom and social justice (El-Ghobashy, 2013).

→ **Drive Evaluation (D')**: The drive of the Egyptian uprising is assessed at a very high level (0.90).

→ **Will (Political Fragmentation)**

The will in the Egyptian uprising can be traced as follows:

a. Organizational will was fragmented among different forces: independent youth, liberal movements, the Muslim Brotherhood, and leftist groups (Amin, 2013; Holmes, Dec 2012).

b. Although the protesters succeeded in overthrowing President Mubarak, internal divisions weakened the capacity to build a unified political system (Amin, 2013).

**Will Evaluation (W')**: The will of the Egyptian uprising is assessed at a moderate level (0.40).

→ **Context (Internal and External Environment)**

The context of the Egyptian uprising can be outlined as follows:

a. Youth from both genders played a pivotal role in igniting the uprising, serving as the fuel that sparked revolutionary action (Howard & Hussain, 2013).

b. The military institution played a decisive role, intervening to manage the transitional phase and later ousting the democratically elected president, Muhammad Morsi, in July 2013 (Sayigh, 2012; Brownlee et al., 2015).

c. The ongoing severe economic crisis intensified popular discontent (Al Bassam & Ferrant, Jan 25, 2021).

d. Regional and international intervention complicated the scene: some states supported democratic transition, while others preferred backing Egypt's security establishment (Brownlee et al., 2015).

→ **Context Evaluation ( $\sum\omega C$ )**: The context of the Egyptian uprising is assessed as negative-mixed (0.58).

→ **Equation Application**

$$R = (0.90 \times 0.40) = 0.36 + 0.58 = 0.94$$

→ **Final Result (R)**:

The Egyptian uprising is considered partially successful yet fragile, closer to failure, as it achieved a value not exceeding 0.94. It was strong in its initial momentum but weak in its sustainability.

In its developed version, this study incorporates 'Political Maneuvering' as an organic component of the 'Will' (W) variable. The success of a revolution does not depend solely on the magnitude of popular 'Drive' (D), but rather on the capacity of the 'Will' to exercise 'revolutionary diplomacy' toward hard-power institutions (the military establishment). The lower output value (R) in the Egyptian case, compared to the Philippines, is primarily attributed to the failure of the 'Will' to establish 'negotiation channels' that ensure a transition of power without confrontation with the military—an institution that shifted from a neutral observer to an adversarial actor.

#### Dynamics of the Actor and Hard Institutions:

In this model, the effectiveness of the 'Will' remains incomplete without the strategic capacity for political maneuvering toward the military establishment. While 'Drive' represents the force of popular momentum, 'Will' acts as the 'mastermind' that translates this force into political reality through negotiation. The failure of the Egyptian case to increase its (R) value was not due to a lack of drive, but rather a flaw in the 'calibration' of its engagement with the military context. Consequently, the military establishment functioned as a 'Constraining Factor' instead of a 'Facilitating Factor'.

#### THE PHILIPPINE REVOLUTION (1986), ACCORDING TO THE MODEL (DRIVE × WILL + CONTEXT)

The Philippine Revolution, known as the People Power Revolution of 1986, succeeded in overthrowing President Ferdinand Marcos after decades of authoritarian rule. It stands as an example of a peaceful revolution that relied on popular crowds and institutional support (Sawin, Winter 1993).

##### 1. Drive (Popular Anger)

The popular drive was rooted in rejection of corruption and authoritarianism, especially after the assassination of opposition leader Benigno Aquino in 1983, which ignited widespread anger among

Filipinos (Sanchez, Feb 2021).

→ **Drive Evaluation (D')**: The drive of the Philippine Revolution is assessed at a very high level (0.90).

##### 2. Will (Organizational Will)

The will in the Philippine Revolution can be traced as follows (Sawin, Winter 1993; Sanchez, Feb 2021; Franco, 2004):

a. Organizational will was embodied in the opposition coalition led by Corazon Aquino, supported by the Catholic Church.

b. The crowds on EDSA Avenue represented a collective peaceful will, with sit-ins organized in a disciplined manner.

→ **Will Evaluation (W')**: The will of the Philippine Revolution is assessed at a high level (0.70).

##### 3. Context (Internal and External Environment)

The context of the Philippine Revolution can be outlined as follows (Sawin, Winter 1993; Thompson, 1995):

a. The Catholic Church played an important mobilizing role.

b. The army was divided between supporters of President Marcos and opponents, which weakened the regime.

c. International support, particularly from the United States, contributed to pressuring Marcos to step down.

→ **Context Evaluation ( $\sum\omega C$ )**: The context of the Philippine Revolution is assessed as positive (0.65).

##### 4. Equation Application

$$R = (0.90 \times 0.70) + 0.65 = 1.28$$

→ **Final Result (R)**: The revolution was successful, as the value exceeded 1.2, reflecting a strong balance between drive, will, and context.

#### COMPARISON AMONG REVOLUTIONARY CASE STUDIES

After completing the evaluation of each revolutionary case study, and to facilitate the reader's task, we provide here a general comparative table for them.

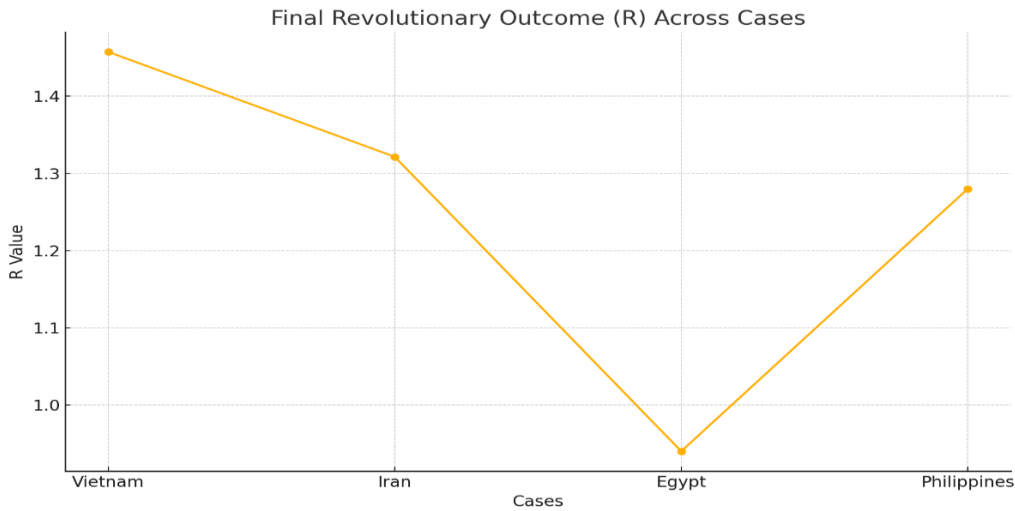
*Table 7: Quantitative Application of the Revolutionary Equation  $R = (D \times W) + C$  on Selected Case Studies*

Revolutionary Case	Drive Evaluation (D')	Will Evaluation (W')	Context Evaluation ( $\sum\omega C$ )	Equation Calculation $R = (D \times W) + C$	Final Result (R)	Interpretation
Vietnam (1945-1975)	0.95	0.85	0.65	$(0.95 \times 0.85) + 0.65$	1.4575	Complete Success (Integration of elements)
Iran (1979)	0.88	0.82	0.60	$(0.88 \times 0.82) + 0.60$	1.3216	Complete Success (Balance of Drive and Will)
Egypt (2011-2013)	0.90	0.40	0.58	$(0.90 \times 0.40) + 0.58$	0.94	Partial Success/Stalemate (Divided Will)
Philippines (1986)	0.90	0.70	0.65	$(0.90 \times 0.70) + 0.65$	1.28	Rapid Success (Favorable context & centralized will)

**Analytical Commentary:**

The numerical results presented in the table above demonstrate that *decisive revolutionary success* (represented by  $R > 1.20$  values) is conditionally linked to the capacity of the *Will (W)* to match the strength of the *Drive (D)*. In the Philippine case, despite having a 'Drive' equal to that of the Egyptian case (0.90), the fundamental difference in 'Will' (0.70 vs. 0.40) was the determining factor between rapid success and field stalemate.

Furthermore, the results indicate that *Context (C)* functions as a weighting factor; in Vietnam and Iran, the high positive context contributed to pushing the final results to record levels. This detailed calibration concludes that a revolution succeeds quantitatively once the product of (Drive  $\times$  Will) plus Context exceeds the threshold value of (1.00). The further the result rises above this threshold, the more the durability and stability of the revolutionary outcome are confirmed.



**Figure 3: Final Revolutionary Outcomes.**

To maintain consistency between the numerical values assigned to each axis (Drive, Will, Context) and the analytical narrative used to interpret them, a linguistic calibration table has been developed that links each numerical range to a set of appropriate narrative expressions. This table demonstrates how

the difference between numbers (such as 0.95 versus 0.90) is directly translated into a linguistic variation in the strength of expression, so that language becomes a parallel tool to numbers in revealing the subtle distinctions among cases.

**Table 8: Narrative Examples of Case Studies**

Case	Drive	Will	Context
<b>Vietnam (0.95 / 0.85 / 0.65)</b>	The revolutionary drive in Vietnam was absolute and unwavering, moving society with an exceptional sense of historical necessity.	The revolutionary will in Vietnam was strong and resilient, capable of enduring despite sacrifices.	The context in Vietnam was moderate, providing sufficient support though not ideal.
<b>Iran (0.88 / 0.82 / 0.60)</b>	The drive in Iran was strong and notable, expressing coherent determination.	The Iranian will was cohesive and flexible, overcoming obstacles despite challenges.	The Iranian context was limited, yet it did not prevent the revolutionary course.
<b>Egypt (0.90 / 0.40 / 0.58)</b>	The drive in Egypt was strong and prominent, though it did not reach the level of absolute release.	The Egyptian will appeared fragile and fractured, unable to sustain itself, which led to the collapse of momentum.	The Egyptian context was circumstantial and limited, offering partial opportunities without stability.
<b>Philippines (0.90 / 0.70 / 0.65)</b>	The drive in the Philippines was strong, reflecting clear determination.	The Philippines' will was moderate, able to persist but less resilient than Vietnam.	The Philippine context was balanced, providing partial support without major obstruction.

It is inferred from the qualitative calibration matrix above that the variance in revolutionary outcomes is not merely a function of abstract numerical values, but rather a reflection of the nature and quality of the interaction between the equation's

core pillars. While the Vietnamese case was characterized by an 'irresistible momentum' in Drive, integrated with a 'solid will,' the Egyptian case—despite possessing a formidable Drive comparable to that of the Philippines—suffered from 'volitional

fragility.' This weakness hindered the transformation of popular momentum into sustainable institutional gains. This precise linguistic characterization confirms that Context (C) alone does not forge a successful revolution unless accompanied by a Will (W) capable of maneuvering and seizing historical opportunities. Consequently, this matrix provides a sociological explanation for why some revolutionary waves fracture while others endure, positioning 'Will Solidity' as a decisive coefficient that outweighs the tactical importance of mere grievances or 'angry drive'.

## CONCLUSION AND FINDINGS

### ➤ *Conclusion*

The study demonstrates that the stability of the mathematical equation between drive, will, and context does not guarantee the stability of revolutionary outcomes; rather, the variation in calibrating these elements determines whether a revolution moves toward success, failure, or partial success. By comparing the cases of Vietnam, Iran, Egypt, and the Philippines, it becomes clear that the model is capable of explaining the revolutionary spectrum in its diverse dimensions. Nevertheless, the findings raise new research questions:

1. How can the model be expanded to include partially failed revolutions or long-term transformations?
2. How can cultural and economic factors be integrated into the equation without undermining its stability?

Answering these questions will enhance the model's capacity to become a normative framework in the study of comparative political history, combining interpretive rigor with applicative flexibility.

Regarding mass mobilization, the four cases studied reveal that revolutionary mobilization success depends not only on the strength of drive or organizational will, but also on how the masses are prepared and transformed into a force of collective action. In Vietnam, the National Front and popular

alliances contributed to mobilizing peasants and workers within a long-term national project (Marr, 1971; Kolko, 1985; Giáp, 1961). In Iran, mosques and Khomeini's speeches created a wide religious-social mobilization network that transformed popular anger into an organized movement (Abrahamian, 1982; Kurzman, 2005; Parsa, May 2009). In Egypt, Tahrir Square became a symbol of mass mobilization through social media networks, but political fragmentation weakened the sustainability of this mobilization (El-Ghobashy, 2013; Al Bassam & Ferrant, Jan 25, 2021). In the Philippines, the Catholic Church provided a moral mobilization framework, while peaceful sit-ins on EDSA Avenue transformed the masses into an effective pressure force (Sawin, Winter 1993; Sanchez, Feb 2021).

Thus, the preparation of the masses represents the bridge linking drive, will, and context, explaining why some revolutions succeed in transforming popular energy into sustainable change, while others fail despite strong drive.

### ➤ *Findings*

The study concluded that:

1. Vietnam achieved the highest result (1.465) due to the completeness of the three elements of the model (national drive, organizational will, and a favorable local-international context).
2. Iran achieved complete success (1.3216) thanks to the balance between religious-popular drive, organizational will, and the economic-political context.
3. Egypt achieved partial success, closer to failure (0.94), where the drive was strong but the will was fragmented and the context negative.
4. The Philippines achieved full success (1.28), owing to the alliance of the opposition and the Church, combined with international support and peaceful popular pressure.

The following table aims to summarize the methodological rationale behind the final (R) value, linking the numerical results to the qualitative analysis derived from the literature review.

**Table 9: Interpretation of Variance in Final Outcome (R)**

Case	Final Outcome (R)	Key Explanatory Factor	Methodological Link to Equation
Vietnam	1.4575	Integration between the liberation leadership (Viet Minh) and the broad popular support	High D (0.95) and high W (0.85), which multiplied the revolutionary strength
Iran	1.3216	Unity of will embodied in religious leadership and mass mobilization	High W (0.82), which led to rapid revolutionary achievement
Egypt	0.94	Fragmentation of will between civil forces and the military establishment	High D (0.90) multiplied by low W (0.40), which reduced the effectiveness of the drive
Philippines	1.28	Defection of military and church elites from the ruling Marcos regime	High C (0.65) and relatively high W (0.70): context and will facilitated the outcome

### ➤ Analytical Comparison

1. The drive was high in all cases, confirming that the revolutionary spark is often strong.
2. Will was the decisive factor distinguishing between complete and partial success; organizational fragmentation in Egypt weakened the outcomes, while discipline in Vietnam and Iran, along with institutional alliances in the Philippines, reinforced success.
3. Context played a crucial role; the favorable local-international context in Vietnam and the Philippines supported success, whereas the negative context in Egypt hindered the sustainability of the revolution.

### FUTURE METHODOLOGICAL RECOMMENDATIONS

The study recommends the following:

#### 1. At the methodological level:

- a. Adopt the equation as a normative tool, whereby the model can be used to measure the success or failure of revolutions through precise calibration of the three factors.
- b. Enhance research transparency by including tables and visual charts in each case study, clarifying how qualitative concepts are transformed into quantitative indicators.
- c. Expand the scope of application by testing the model on other revolutions (Arab, Latin American, and European) to confirm its validity across different contexts.

#### 2. At the academic level:

- a. Integrate the philosophical dimension with practical application, highlighting how concepts such as will and freedom can be transformed into measurable tools.
- b. Develop educational tools by using diagrams and

tables in teaching to simplify the understanding of the relationship between structure, agency, and context.

- c. Open the field for international comparison by making the model a reference in comparative studies of revolutions, with potential development to include additional dimensions such as technology and media, and the possibility of translating it into multiple languages.

#### 3. At the practical-political level:

- a. Emphasize the importance of transformative leadership, highlighting the role of leaders capable of converting popular drive into practical will.
- b. Stress the necessity of a favorable context, underscoring that revolutionary success depends not only on drive and will but also on a supportive—or at least non-obstructive—local and international environment.
- c. Ensure precise calibration of the three factors, as any imbalance in one element may lead to the failure of the revolution or deviation from its intended path.

Building upon the aforementioned findings, this study recommends adopting the 'Revolutionary Equation' as a tool for Prospective Analysis. Transitioning from monitoring outcomes to forecasting trajectories requires continuous observation of the 'calibration processes' performed by political actors. By measuring the level of 'Political Maneuvering' within the 'Will' variable and analyzing the weight of the 'International Context,' policymakers and researchers can estimate whether a popular movement will lead to a new stability, reproduce the old regime with new faces, or slide toward state disintegration. Thus, the equation evolves from a rigid mathematical formula into a 'strategic compass' for understanding the dynamics of change in the modern era.

### REFERENCES

- Abrahamian, E. (1982). *Iran Between Two Revolutions*. Princeton: Princeton University Press.
- Abu Nahel, O. 2013. *Al-Hirak al-'Arabi al-Mu'asir: Dirasa Siyāsiyya Susiulujiyya*. [Contemporary Arab Uprising: A Political and Sociological Study]. Beirut: Researcher Center for Palestinian and Strategic Studies. [In Arabic].
- Al Bassam, H. & Ferrant, C. (Jan 25, 2021). "Collective Memory of the 2011 Egyptian Revolution: Surveying Egyptians a Decade After". *The Washington Institute for Near East Policy*; <https://www.washingtoninstitute.org/policy-analysis/collective-memory-2011-egyptian-revolution-surveying-egyptians-decade-after>
- Amin, J. (2013). *Maza Hadath lil-Thawra al-Miṣriyya? [What Happened to the Egyptian Revolution?]* 2<sup>nd</sup> ed. Cairo: Dar Al-Shorouk. [In Arabic].
- Aragón-Artacho, F. J. & Goberna, M. A. (2024). *Mathematics in Politics and Governance*. Cham: Springer Nature Switzerland.

- Arjomand, S. A. (1988). *The Turban for the Crown: The Islamic Revolution in Iran*. Oxford: Oxford University Press.
- Babbie, E. R. (2020). *The Practice of Social Research*. 15th ed. Belmont, CA: Wadsworth Cengage Learning.
- Bista, N. "Vietnamese Revolution." *Educba.com*. Access the site on (November 22, 2025). <https://www.educba.com/vietnamese-revolution/>
- Brinton, C. (1965). *The Anatomy of Revolution*. New York: Vintage Books.
- Brownlee, J.; Masoud, T. & Reynolds, Andrew. (2015). *The Arab Spring: Pathways of Repression and Reform*. Oxford; New York: Oxford University Press.
- de Jong, W. R. (2010). "The analytic-synthetic distinction and the classical model of science: Kant, Bolzano and Frege." *Synthese*. Vol. 174. 237-261. DOI 10.1007/s11229-008-9420-9
- Della Porta, D. & Diani, M. (2006). *Social Movements: An Introduction*. Malden, MA: Blackwell Publishing.
- Duiker, W. J. (2000). *Ho Chi Minh: A Life*. New York: Hyperion.
- El-Ghobashy, M. (2013). The Praxis of the Egyptian Revolution, in David McMurray and Amanda Ufheil-Somers. *The Arab Revolts: Dispatches on Militant Democracy in the Middle East*. Belmington: Indiana University Press.
- Frankl, V. (1984). *Man's Search for Meaning*, New York: Washington Square Press.
- Franco, J. G. (2004). The Philippines' Fractious Civil Society and Competing Visions of Democracy, in Muthiah Alagappa (Editor). *Civil Society and Political Change in Asia*. Stanford, California: Stanford University Press.
- Gaertner, W. (2009). *A Primer in Social Choice Theory*. Oxford: Oxford University Press.
- Giáp, V. (1961). *People's War, People's Army*. Hanoi: People's Publishing House.
- Goldstone, J. A. (2003). "Comparative Historical Analysis and Knowledge Accumulation in the Study of Revolutions." In *Comparative Historical Analysis in the Social Sciences*, ed. James Mahoney & Dietrich Rueschemeyer. Cambridge University Press.
- Hamarneh, M. (April 2011). *Misr 2011: Min al-Hirak ila al-Thawra*. [Egypt 2011: From Movement to Revolution]. Doha: Arab Center for Research and Policy Studies. Pp.1-11. [In Arabic].
- Holmes, A. (Dec 2012). "There are Weeks When Decades Happen: Structure and Strategy in the Egyptian Revolution." *Mobilization: An International Quarterly*. Vol. 17(4). 391-410. DOI: 10.17813/maiq.17.4.905210228n564037
- Howard, P. N. & Hussain, M. M. (2013). *Democracy's Fourth Wave? Digital Media and the Arab Spring*. Oxford: Oxford University Press.
- Johnson, P. E. (1989). *Formal Theories of Politics: Mathematical Modelling in Political Science*. Oxford: Pergamon Press plc.
- Kandil, H. (2012). *Soldiers, Spies, and Statesmen: Egypt's Road to Revolt*. London; Brooklyn, NY: Verso.
- Keddie, N. & Richard, Y. (1981). *Roots of Revolution: An Interpretive History of Modern Iran*. New Haven: Yale University Press.
- Khomeini, A. (2008). *Islamic Government: Governance of the Jurist*. (3<sup>rd</sup> edition. Hamid Algar, Trans). Tehran: The Institute for Compilation and Publication of Imam.
- Khomeini, A. (2009). *Sahifa al-Imam: Turath Al 'Imam Khomeini*. (1st Edition. Vol. 4). (Munir Masoudi and Saleh Majdi, Trans). Tehran: Institute for Organizing and Publishing the Works of Imam Khomeini. {In Arabic}.
- Kolko, G. (1985). *Anatomy of a War: Vietnam, the United States, and the Modern Historical Experience*. New York: Pantheon Books.
- Kuhl, J. (1987). *Motivation and Action Control*. Berlin: Springer.
- Kurzman, C. (2005). *The Unthinkable Revolution in Iran*. Cambridge, Mass.: Harvard University Press.
- Marr, D. G. (1971). *Vietnamese Anticolonialism 1885-1925*. Berkeley: University of California Press.
- Maxwell, J. A. (2012). *Qualitative Research Design: An Interactive Approach*. (3rd Edition). London: SAGE Publications.
- McAdam, D.; Tarrow, S. & Tilly, C. (2004). *Dynamics of Contention*. Cambridge: Cambridge University Press.
- Merriam, S. B. & Tisdell, E. J. (2016). *Qualitative Research: A Guide to Design and Implementation*. 4th Edition. Hoboken, NJ: Jossey-Bass. A Wiley Brand.
- Millen, R. (2008). *The Political Context behind Successful Revolutionary Movements, Three cases studies: Vietnam (1955-63), Algeria (1945-62), and Nicaragua (1967-79)*. Carlisle Barracks, Pennsylvania: Strategic Studies Institute. U.S. Army War College.
- Moaddel, M. (1993). *Class, politics, and ideology in the Iranian revolution*. New York: Columbia University Press.
- Nietzsche, F. (1967). *The Will to Power*. (Walter Kaufmann and R. J. Hollingdale, Trans). New York: Vintage

## Books.

- Olson, M. (1965). *The Logic of Collective Action: Public Goods and the Theory of Groups*. Cambridge, Mass.: Harvard University Press.
- Parsa, M. (May 2009). State, Class, and Ideology in the Iranian Revolution. *Comparative Studies of South Asia, Africa, and the Middle East*. Duke University Press. Vol. 29 (1). 3-17. Doi: 10.1215/1089201x-2008-041
- Przeworski, A. & Teune, H. (1970). *The Logic of Comparative Social Inquiry*. Hoboken, NJ: John Wiley & Sons, Inc.
- Riba, C. (June 1996). "The Use of Mathematics in Political Science." *European Journal of Political Research*. Vol. 29 (4). 477-508, <https://doi.org/10.1111/j.1475-6765.1996.tb00663.x>
- Sanchez, M. J. (Feb 2021). "The People Power Revolution, Philippines 1986." *Origins: Current Events in Historical Perspective*. <https://origins.osu.edu/milestones/people-power-revolution-philippines-1986>
- Sartre, J. (1956). *Being and Nothingness*. (Hazel E. Barnes, Trans). New York: Washington Square Press.
- Sawin, J. L. (Winter 1993). "A Study of the Peaceful Revolution: The Philippines, 1986." *The Fletcher Forum of World Affairs*. The Fletcher School of Law and Diplomacy. Vol. 17 (1). 181-207. <https://www.jstor.org/stable/45288833>
- Sayigh, Y. (2012). *Above the State: The Officers' Republic in Egypt*. Washington: Carnegie Middle East Center.
- Skocpol, T. (1979). *States and Social Revolutions: A Comparative Analysis of France, Russia, and China*. Cambridge; New York: Cambridge University Press.
- Skocpol, T. & Somers, M. (Apr. 1980). "The Uses of Comparative History in Sociology". *Comparative Studies in Society and History*. Vol. 22(2). pp. 174-197.
- Snow, D. A. & Benford, R. D. (1988). "Ideology, Frame Resonance, and Participant Mobilization." *International Social Movement Research*. 1. 197-217.
- Taylor, K. W. (1983). *The Birth of Vietnam*. Berkeley: University of California Press.
- "The Vietnamese Revolution - Revolutions: Theorists, Theory and Practice." *University of Colorado Pressbooks*. Access the site on (November 22, 2025). <https://colorado.pressbooks.pub/revolution/chapter/the-vietnamese-revolution/>
- Thompson, M. R. (1995). *The Anti-Marcos Struggle: Personalistic Rule and Democratic Transition in the Philippines*. New Haven and London: Yale University Press.
- Tilly, C. (1978). *From Mobilization to Revolution*. New York: Random House.
- Weber, M. (1978), *Economy and Society*. Berkeley: University of California Press.
- Waltz, K. N. (1979). *Theory of International Politics*. Philippines: Addison-Wesley Publishing Company.