



Evolution of City-level New Energy Vehicle Policy in China

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OUTLINE



- **1 INTRODUCTION**
- **2 METHODOLOGY**
- **3 DATA SOURCES**
- **4 POLICY EVOLUTION**
- **5 DISCUSSION
& CONCLUSIONS**

1. Introduction -- Background



- **Urban noise and air pollution**
- **Mismatch between power supply and demand**

Solution



Barriers

- **high investment cost**
- **short cruise range**
- **Insufficient charging infrastructures**

1. Introduction -- Background



- **Different policies are enacted in those pilot cities.**
- **Existing studies mainly focus on central government policies.**



City-level NEV policy evolution?



1. Introduction -- Motivation

To summarize China's city-level NEV policies systematically and reveal the characteristics of the policy enactment to provide the city governments a policy development database to refer to.

2. Methodology



Qualitative method
--Content Analysis

3. Data sources



- **The pilot cities' official websites**
- **The relevant functional departments' websites**



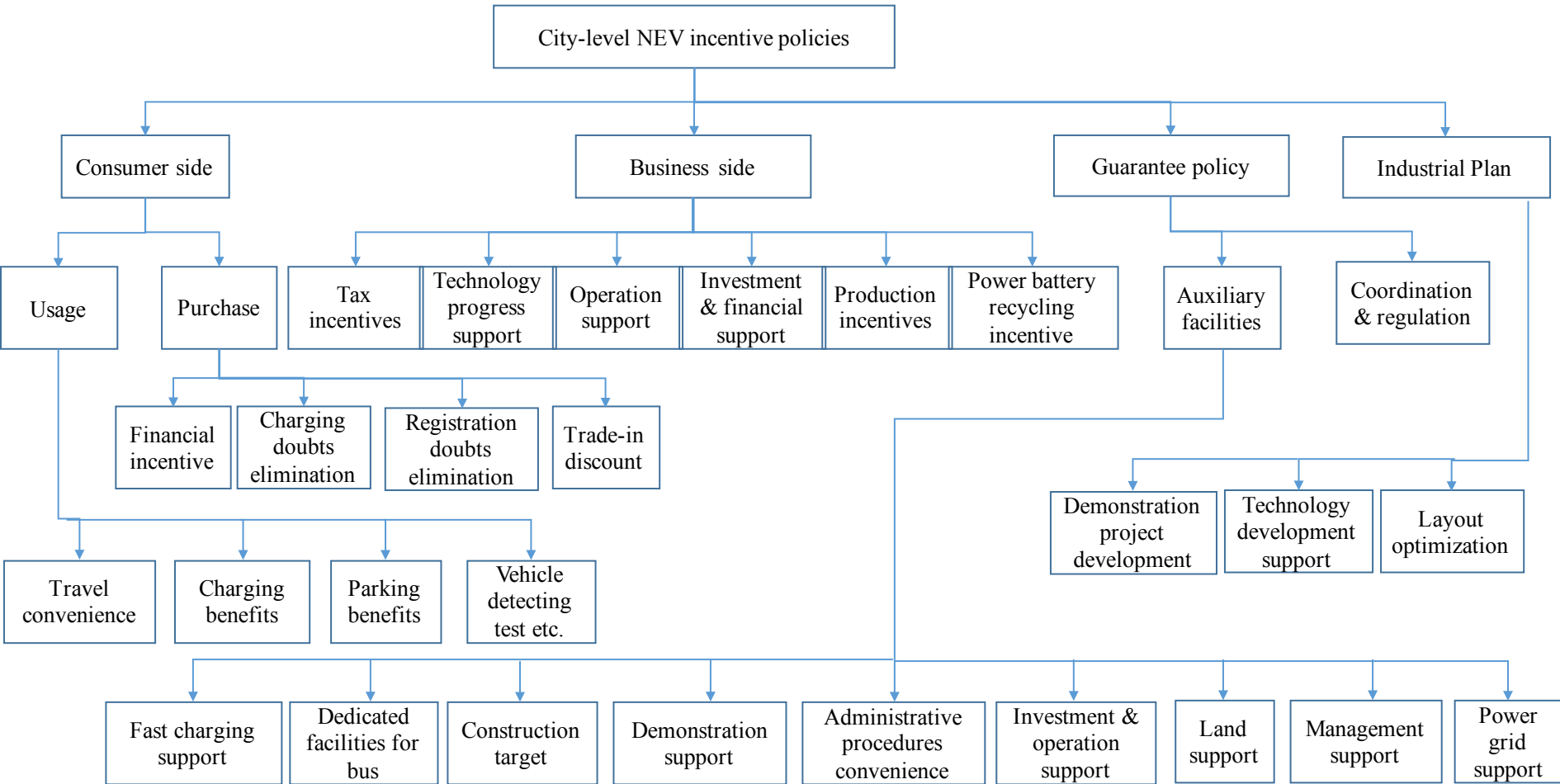
334 policy documents are at last obtained of 73 cities during 2009 to 2018.

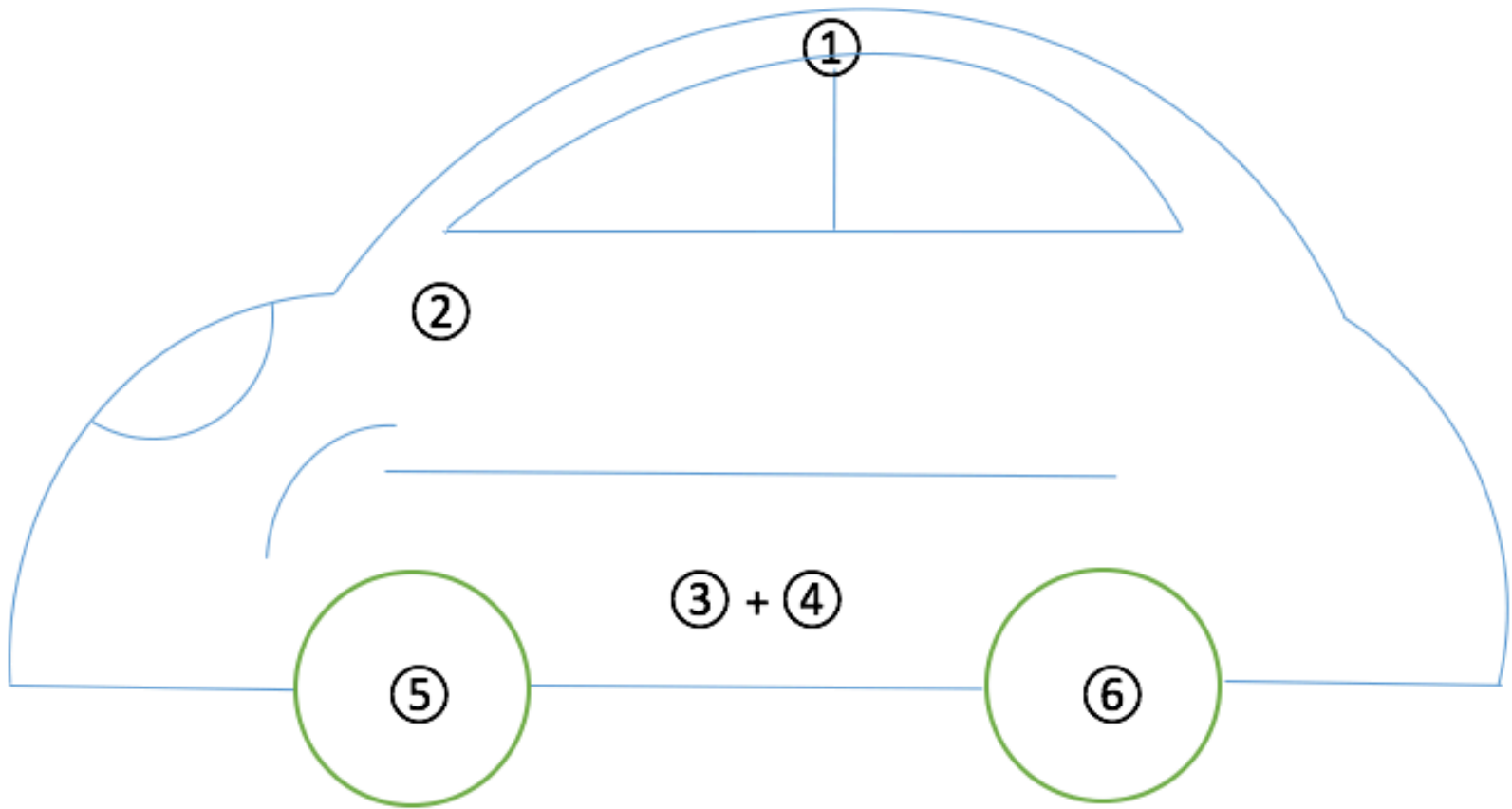
4. Policy Evolution



4.1 Policy Instruments Description

4. Policy Evolution





Note:

- ① **Infrastructure Support**
- ② **Industrial Plan**
- ③ **Coordination and Regulation**
- ④ **Market Management**
- ⑤ **Enterprise Support**
- ⑥ **Consumer side Incentives(Purchase & Usage)**

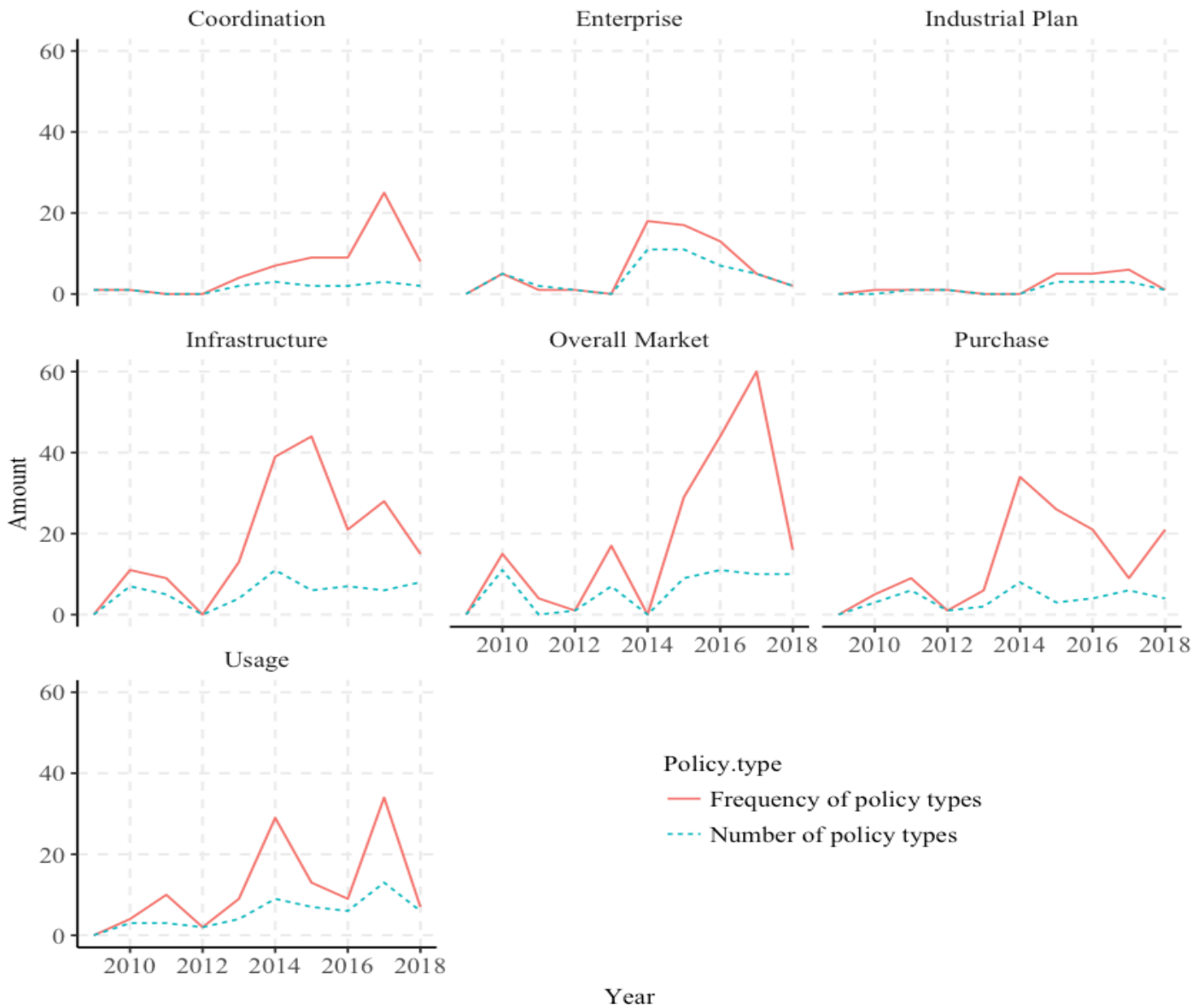
4. Policy Evolution



4.2 Stages of policy development



4.2 Stages of policy development





4.2 Stages of policy development

- (1) Infancy stage (2009-11)**
- (2) Interim stage(2012-13)**
- (3) Rapid growth stage (2014-15)**
- (4) Market construction and management stage (2016-17)**
- (5) Stable development stage (from 2018)**



4.2 Stages of policy development

Infancy stage (2009-11)

- (1) “Ten Cities, Thousands of EV” project was launched.
- (2) Governments established the leading groups for the overall coordination and regulation of the NEV market during this period.



4.2 Stages of policy development

Interim stage (2012-13)

(1) Cities' enactment of NEV promotion policies had gone from stagnation to recovery.

(2) Four ministries issued “Notice on Continuing the Promotion and Application of New Energy Vehicles ” in Sep. 2013 to continue NEV promotion.



4.2 Stages of policy development

Rapid growth stage (2014-15)

- (1) The number of enterprise side policies and purchase related policies both reached the peak in this period .
- (2) The key reason for this boom is that the second batch of pilot cities was established in Jan. 2014 .



4.2 Stages of policy development

Market construction and management stage

(2016-17)

The number of policy instruments (types) for overall market management soared obviously over this period.

The same is true for the policy for market coordination and regulation.



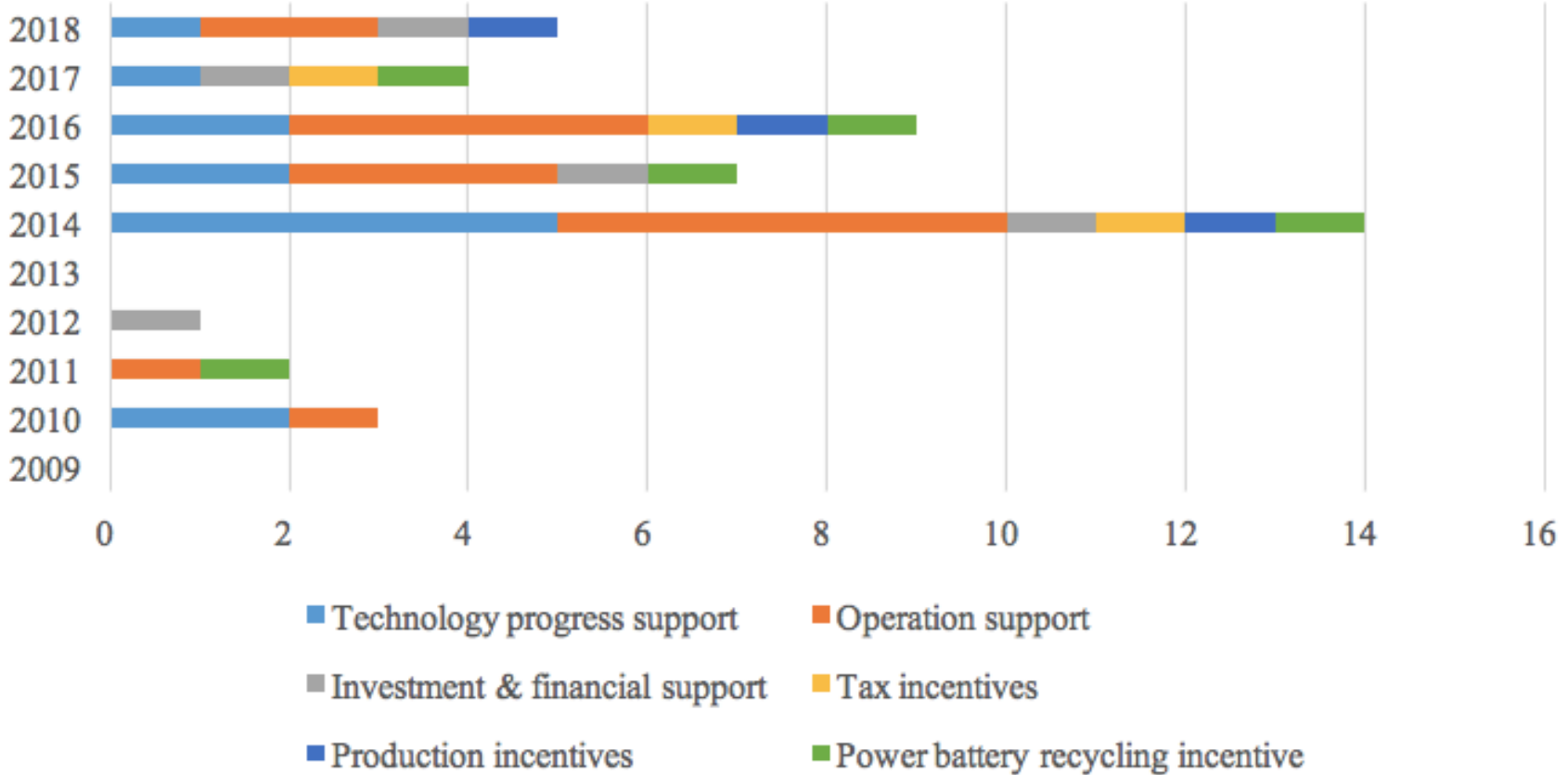
4.2 Stages of policy development

Stable development stage (from 2018)

- (1) City governments are not so active in creating new policy instruments.
- (2) Despite of a small increase of the policy instruments targeting on the convenience of consumers' NEV purchase, all other six categories of incentive policies decreased a lot.



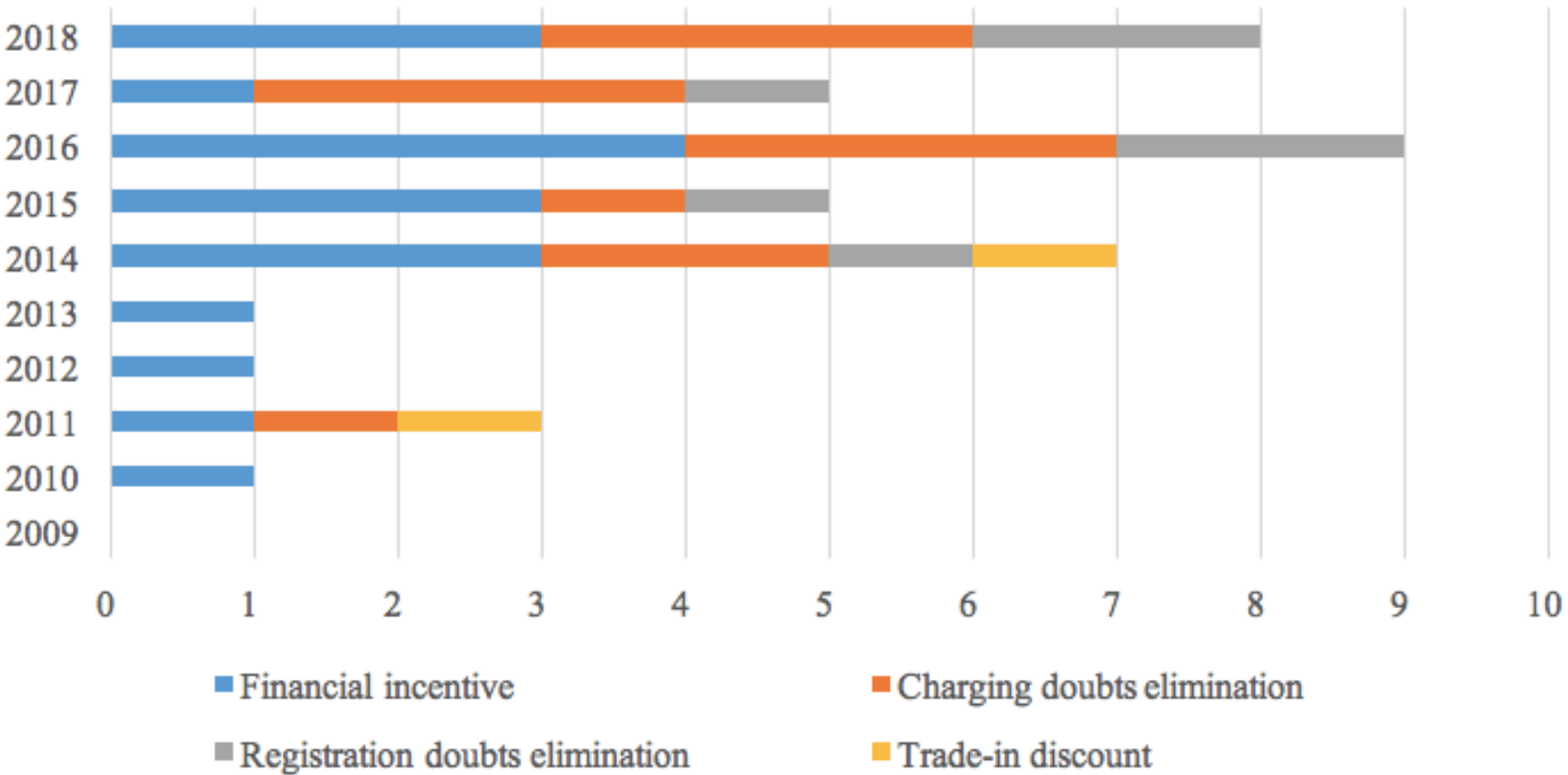
4.3 Evolution features analysis



Enterprise side policy instrument types



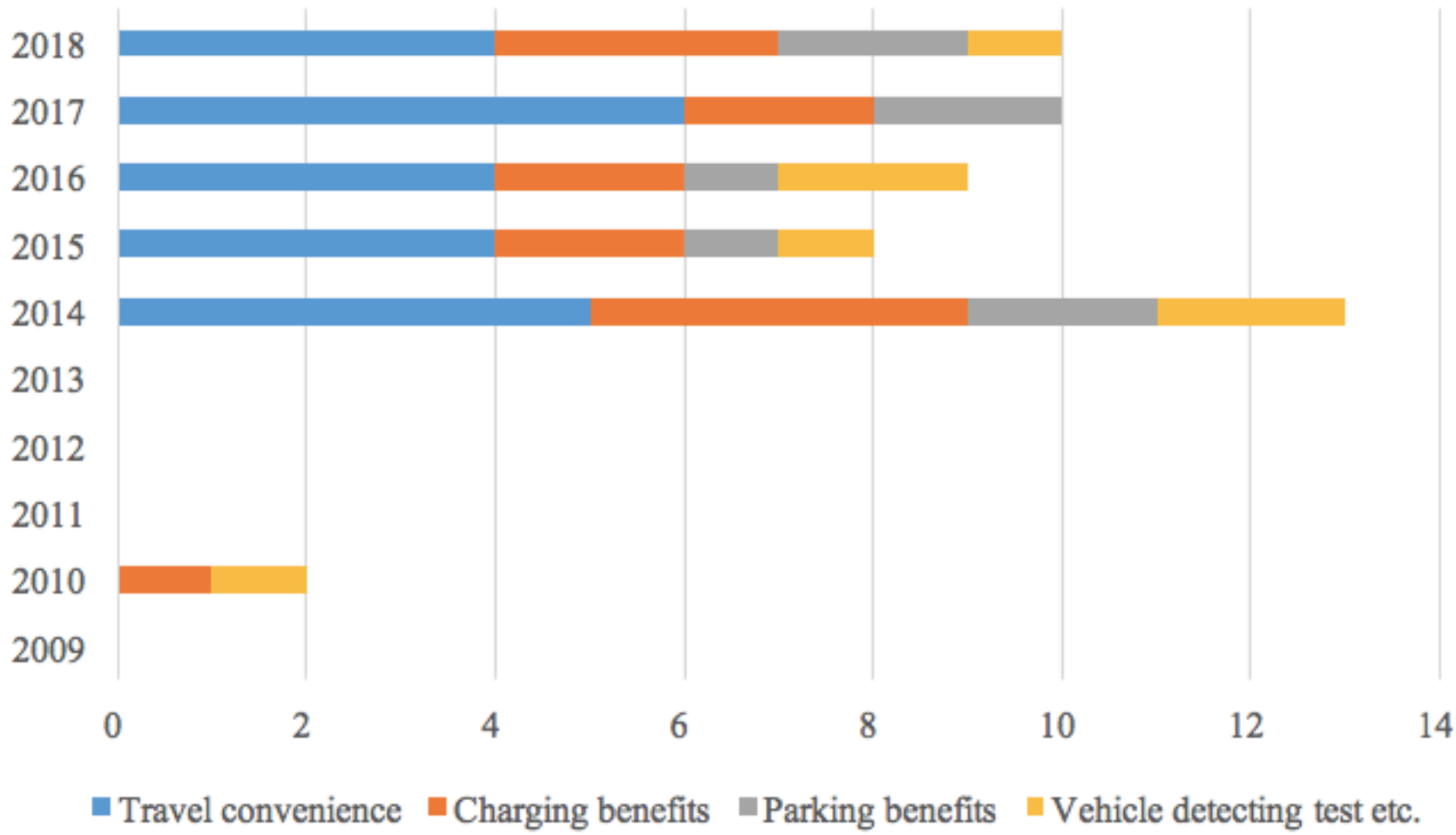
4.3 Evolution features analysis



Types of policy instruments on purchase



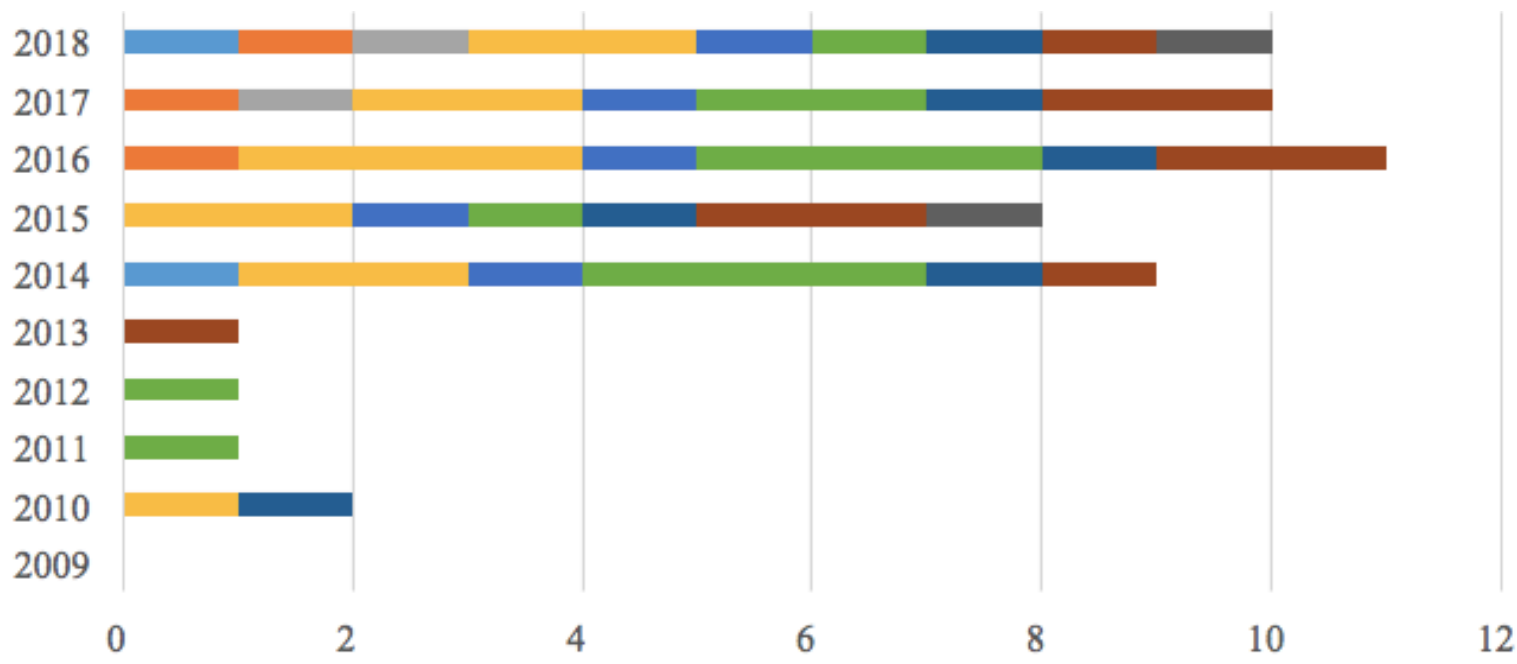
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Types of policy instruments on consumers' usage



4.3 Evolution features analysis

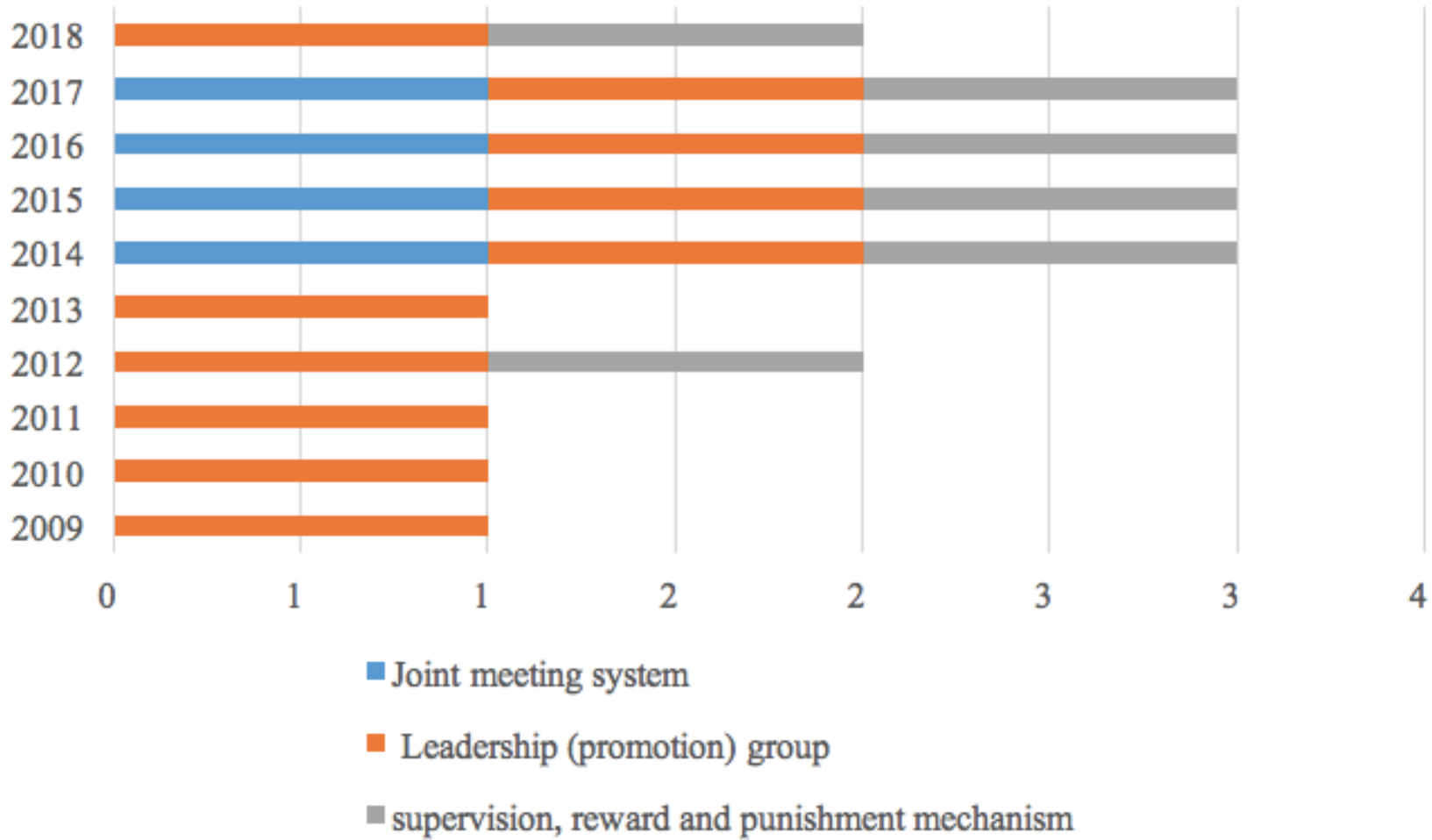


- Fast charging construction support
- Demonstration support
- Bus transportation facilities
- Construction target
- Administrative procedures convenience
- Investment and operation support
- Land support
- Management support
- Power grid support

Types of policy instruments on auxiliary infrastructure construction



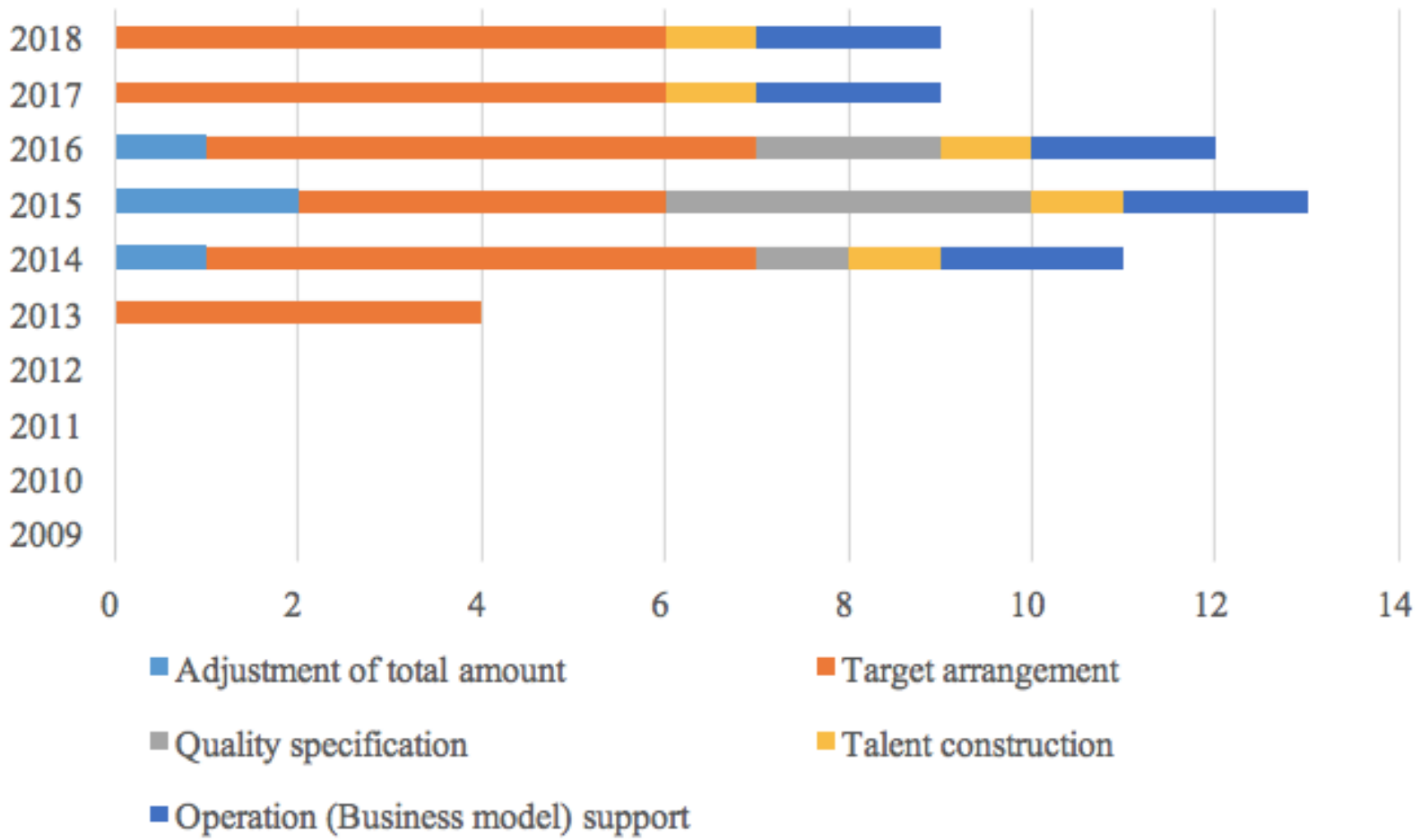
4.3 Evolution features analysis



Types of policy instruments on coordination and regulation



4.3 Evolution features analysis



Types of policy instruments on market management



5. Discussion & Conclusions

Infancy stage

- 1. Establishment of the leadership groups**
- 2. Technology and operation supports**
- 3. Elimination of consumers' anxiety about charging and purchase price**
- 4. The land priority and investment of infrastructure construction**



5. Discussion & Conclusions

Interim stage

- 1. Investment and financial support for NEV enterprise**
- 2. The infrastructure management support policies**
- 3. The supervision, reward and punishment mechanism**



5. Discussion & Conclusions

Rapid growth stage

- 1. Policies in the later stages are more diverse.**
- 2. The policy instruments were relatively comprehensive and stable from this stage.**



5. Discussion & Conclusions

Market construction and management stage

- 1. Policies of all kinds bloomed together.**
- 2. Governments put more efforts on building a more healthy NEV market in the market construction and management stage .**

5. Discussion & Conclusions



Stable development stage

- 1. The number of policy documents decreased in this stage.**
- 1. Non-effective policies will be replaced.**
- 2. There will be less inter-city emulation.**
- 3. Policies of infrastructure construction and consumers' usage will remain the priorities for policymakers.**



Transforming Energy Markets

Thank you !

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