

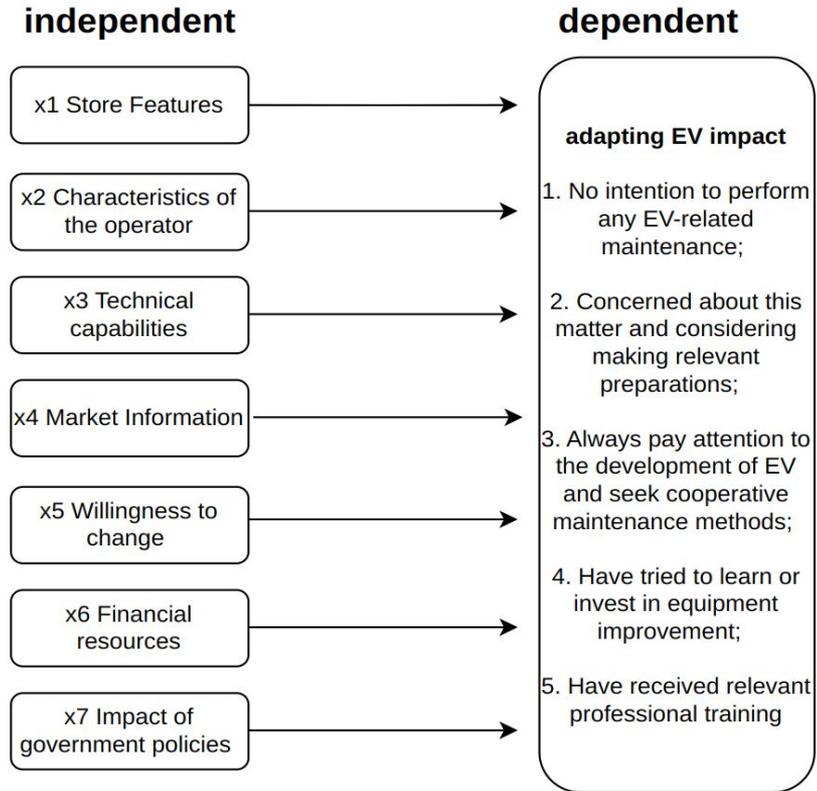


# How do traditional auto repair shops cope with the shift to electric vehicles?

## Quantitative Data

X: "Factors that may influence or explain the transformation strategies adopted by repair shops"

Y: "How repair shops are adapting to the rise of electric vehicles" Measured by specific quantitative indicators:





# Quantitative Data - Questionnaire

No	Question	Fill in
x1 - Q1	Store name (optional)	
x1 - Q2	Location	<input type="checkbox"/> North District <input type="checkbox"/> Central District <input type="checkbox"/> South District <input type="checkbox"/> East District
x1 - Q3	Years of store establishment	<input type="checkbox"/> Less than 5 years <input type="checkbox"/> 5–10 years <input type="checkbox"/> 11–20 years <input type="checkbox"/> More than 20 years
x1 - Q4	Store size (number of employees)	<input type="checkbox"/> 1-3 people <input type="checkbox"/> 4-10 people <input type="checkbox"/> 11-30 people <input type="checkbox"/> More than 30 people
x2 - Q5	Age of the operator	<input type="checkbox"/> Under 30 <input type="checkbox"/> 31–40 <input type="checkbox"/> 41–50 <input type="checkbox"/> 51–60 <input type="checkbox"/> 60 and over
x2 - Q6	Highest educational level of the operator	<input type="checkbox"/> High school/vocational <input type="checkbox"/> College <input type="checkbox"/> University <input type="checkbox"/> Master's <input type="checkbox"/> Doctoral
x3 - Q7	How many years of experience does the operator have in automobile maintenance?	<input type="checkbox"/> Less than 5 years <input type="checkbox"/> 5–10 years <input type="checkbox"/> More than 10 years



Likert Five-point scale: 1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5. Strongly agree

	No.	Question	Fill in
x4-	Q8	I think electric vehicles will gradually replace traditional gasoline vehicles.	<input type="checkbox"/> (Five-point scale)
x4-	Q9	The popularity of electric vehicles has put pressure on the operation of my store.	<input type="checkbox"/> (Five-point scale)
y-	Q10	I am interested in learning electric vehicle maintenance technology.	<input type="checkbox"/> (Five-point scale)
y-	Q11	I think transitioning to investing in electric vehicle maintenance is the future trend.	<input type="checkbox"/> (Five-point scale)
y-	Q12	We have started to collect information on electric vehicle maintenance.	<input type="checkbox"/> (Five-point scale)
y-	Q13	Employees have received relevant training on electric vehicles.	<input type="checkbox"/> (Five-point scale)
y-	Q14	The store has purchased some of the equipment needed to repair electric vehicles.	<input type="checkbox"/> (Five-point scale)



Likert Five-point scale: 1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5. Strongly agree

	No.	Question	Fill in
x5-	Q15	We are willing to establish cooperation with electric vehicle manufacturers or suppliers.	<input type="checkbox"/> (Five-point scale)
x5-	Q16	Our store has the ability to further transform into a provider of electric vehicle maintenance services.	<input type="checkbox"/> (Five-point scale)
x4-	Q17	Lack of relevant professional skills and training opportunities	<input type="checkbox"/> (Five-point scale)
x6-	Q18	Insufficient funds to purchase new equipment	<input type="checkbox"/> (Five-point scale)
x6-	Q19	Customers have not yet expressed their demand for electric vehicle repairs	<input type="checkbox"/> (Five-point scale)
x7-	Q20	Lack of relevant government subsidies or guidance	<input type="checkbox"/> (Five-point scale)
x7-	Q21	Unable to grasp market and policy changes in real time	<input type="checkbox"/> (Five-point scale)

# Qualitative Data - In-depth interviews



No.	Interview question	Notes/code classification (for subsequent analysis)
Q1	<i>How long have you been engaged in car repair? Can you tell us about your background?</i>	Experience Background
Q2	<i>What do you think about the impact of electric vehicles on the maintenance industry?</i>	Cognitive attitude
Q3	<i>Does the store currently have any plans to invest in EV repairs? What is the biggest difficulty you encountered?</i>	Strategies and challenges
Q4	<i>Are employees currently receiving relevant training? Is the device updated?</i>	Technical capabilities
Q5	<i>Have you tried to cooperate with external organizations (such as manufacturers, schools)? What are the results?</i>	Collaboration Resources
Q6	<i>If you had more resources, which problem would you most like to solve first?</i>	Resource requirements
Q7	<i>What is your opinion on the subsidies and policies currently provided by the government?</i>	Policy Perception
Q8	<i>How do you think traditional auto repair shops should position themselves in 3-5 years?</i>	Future Outlook



## What we hope to gain from this study

1. How many maintenance plants are ready, are preparing, or do not want to change, or simply give up?
2. What are the main factors that influence their behavior?
3. Are there different impacts depending on the region, scale, and age of the operator?