Government College of Technology, Coimbatore

TamilNadu Marginal Workers Assessment

1. Demographic Analysis for Age and Industry-Category:

```python
# Perform demographic analysis

# Calculate distribution based on age
age_distribution = df['Age group'].value_counts()
age_distribution
```

```python
df['Combined Category - A - Persons'] = (
    df['Industrial Category - A - Plantation, Livestock, Forestry,
Fishing, Hunting and allied activities - Persons'].astype(str) +
    df['Industrial Category - A - Agricultural labourers -
Persons'].astype(str) +
    df['Industrial Category - A - Cultivators - Persons'].astype(str)
)
df['Combined Category - A - Persons']
```

```python
industrial_category_distribution_A = df['Combined Category - A -
Persons'].value_counts()
industrial_category_distribution_A
```

```python
industrial_category_distribution_B = df['Industrial Category - B -
Persons'].value_counts()
industrial_category_distribution_B
```

```python
df['Combined Category - C - Persons'] = (
    df['Industrial Category - C - HHI - Persons'].astype(str) +
    df['Industrial Category - C - Non HHI - Persons'].astype(str)
)
industrial_category_distribution_C = df['Combined Category - C -
Persons'].value_counts()
industrial_category_distribution_C
```

```python
industrial_category_distribution_D_E = df['Industrial Category - D & E
- Persons'].value_counts()
industrial_category_distribution_D_E
```

```python
industrial_category_distribution_F = df['Industrial Category - F -
Persons'].value_counts()
industrial_category_distribution_F
```

```python
df['Combined Category - G - Persons'] = (
    df['Industrial Category - G - HHI - Persons'].astype(str) +
    df['Industrial Category - G - Non HHI - Persons'].astype(str)
)
industrial_category_distribution_G =df['Combined Category - G -
Persons'].value_counts()
industrial_category_distribution_G
```

```python
industrial_category_distribution_H = df['Industrial Category - H -
Persons'].value_counts()
industrial_category_distribution_H
```

```python
industrial_category_distribution_I = df['Industrial Category - I -
Persons'].value_counts()
industrial_category_distribution_I
```

```python
df['Combined Category - J - Persons'] = (
    df['Industrial Category - J - HHI - Persons'].astype(str) +
    df['Industrial Category - J - Non HHI - Persons'].astype(str)
)
industrial_category_distribution_J =df['Combined Category - J -
Persons'].value_counts()
industrial_category_distribution_J
```

```python
industrial_category_distribution_K_and_M = df['Industrial Category - K
to M - Persons'].value_counts()
industrial_category_distribution_K_and_M
```

```python
industrial_category_distribution_N_and_O = df['Industrial Category - N
to O - Persons'].value_counts()
```

```
industrial_category_distribution_P_and_Q = df['Industrial Category - P
to Q - Persons'].value_counts()
industrial_category_distribution_P_and_Q
```

```
df['Combined Category - R_to_U - Persons'] = (
    df['Industrial Category - R to U - HHI - Persons'].astype(str) +
    df['Industrial Category - R to U - Non HHI - Persons'].astype(str)
)
industrial_category_distribution_R_to_U =df['Combined Category - R_to_U
- Persons'].value_counts()
industrial_category_distribution_R_to_U
```

2. Visualizations:

```
# Create visualizations

# Visualization 1: Age distribution
plt.figure(figsize=(10, 6))
sns.barplot(x=age_distribution.index, y=age_distribution.values)
plt.xlabel('Age')
plt.ylabel('Count')
plt.title('Age Distribution of Marginal Workers')
plt.show()
```
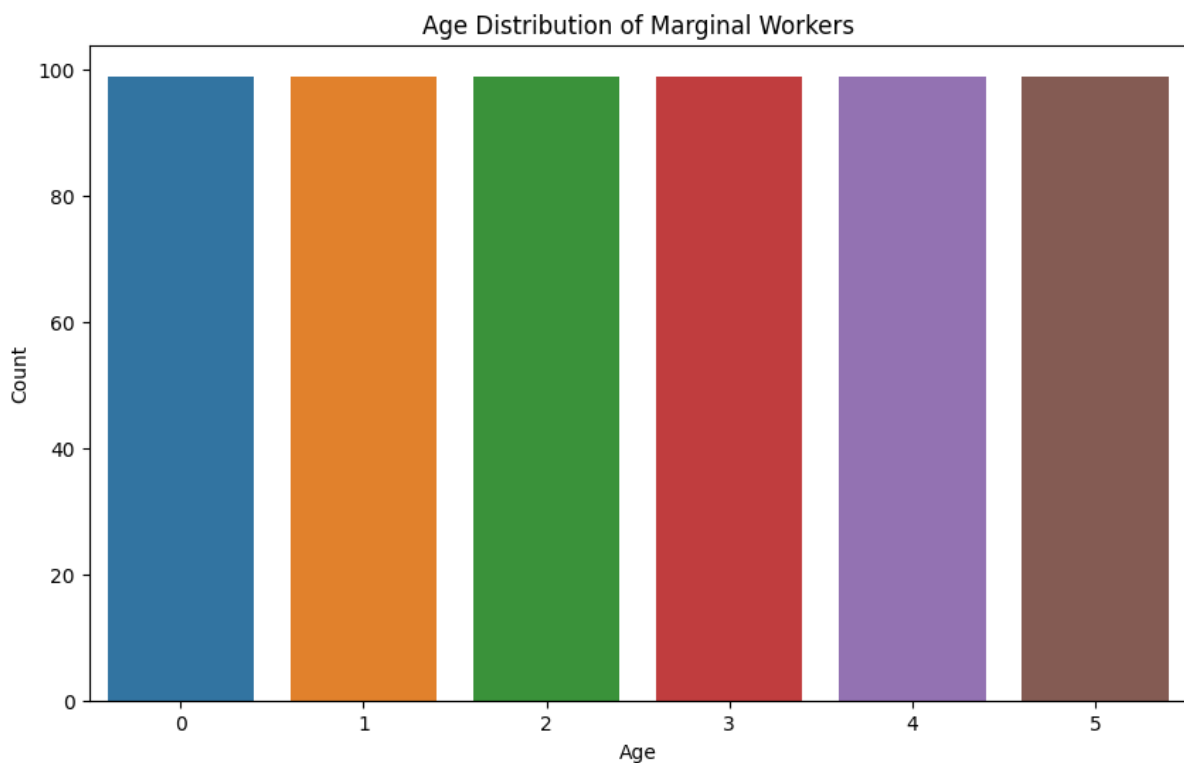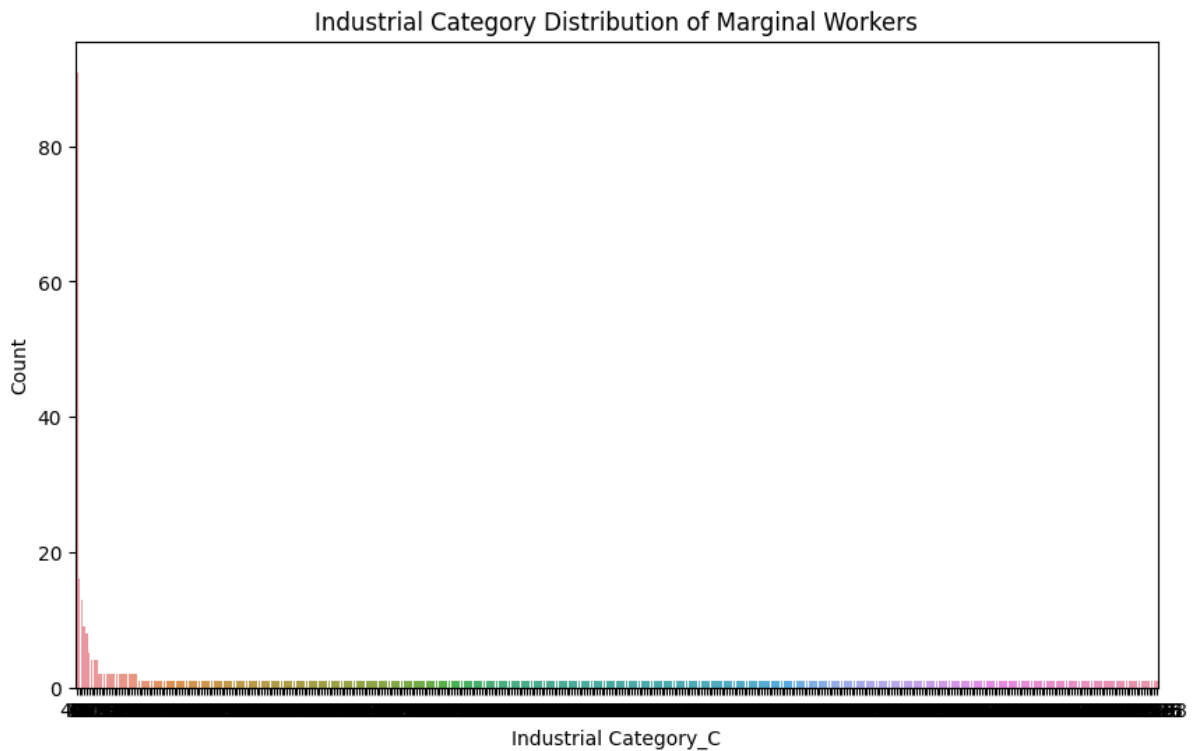
```
plt.figure(figsize=(10, 6))
sns.barplot(x=industrial_category_distribution_A.index,
y=industrial_category_distribution_A.values)
plt.xlabel('Industrial Category_A')
plt.ylabel('Count')
plt.title('Industrial Category Distribution of Marginal Workers')
plt.show()
```


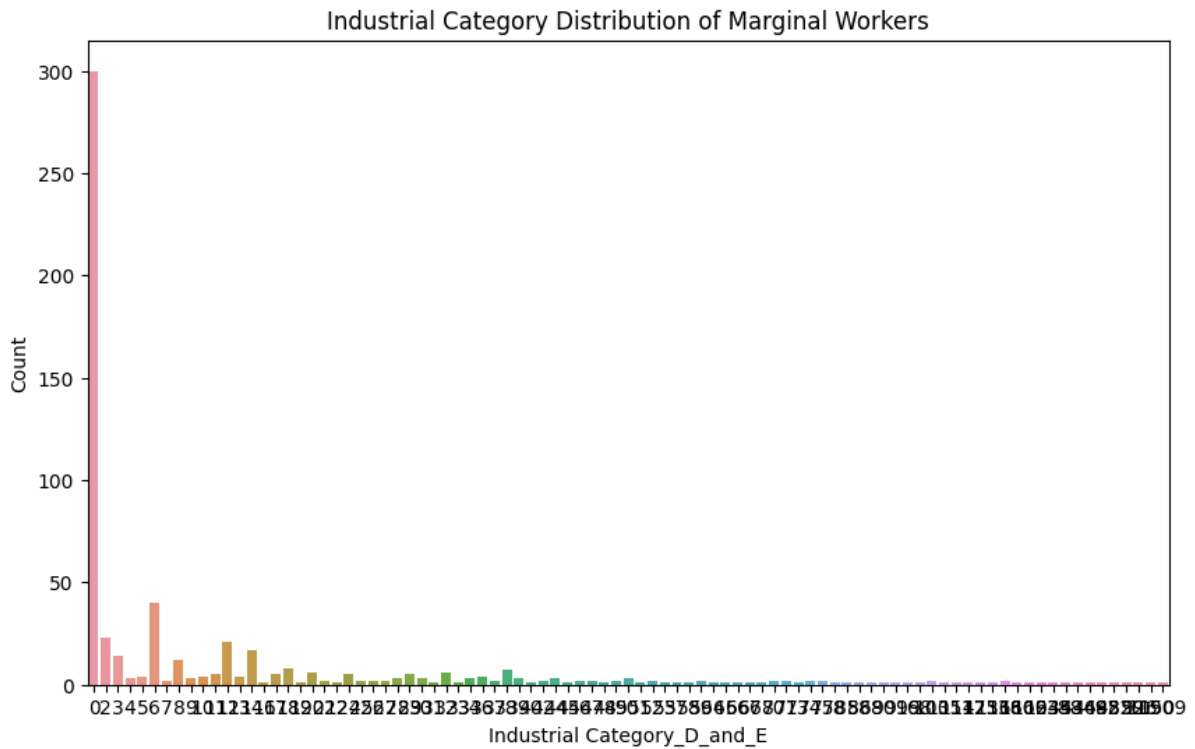Industrial Category Distribution of Marginal Workers
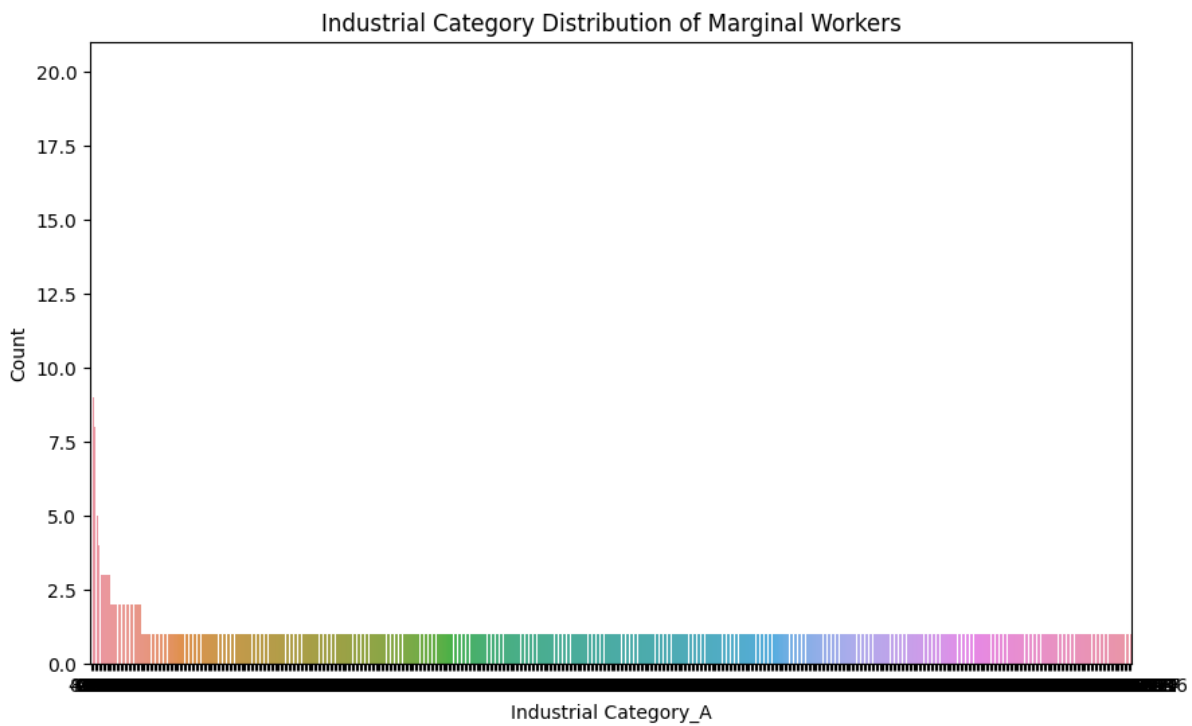
```
plt.figure(figsize=(10, 6))
sns.barplot(x=industrial_category_distribution_B.index,
y=industrial_category_distribution_B.values)
plt.xlabel('Industrial Category_B')
plt.ylabel('Count')
plt.title('Industrial Category Distribution of Marginal Workers')
plt.show()
```

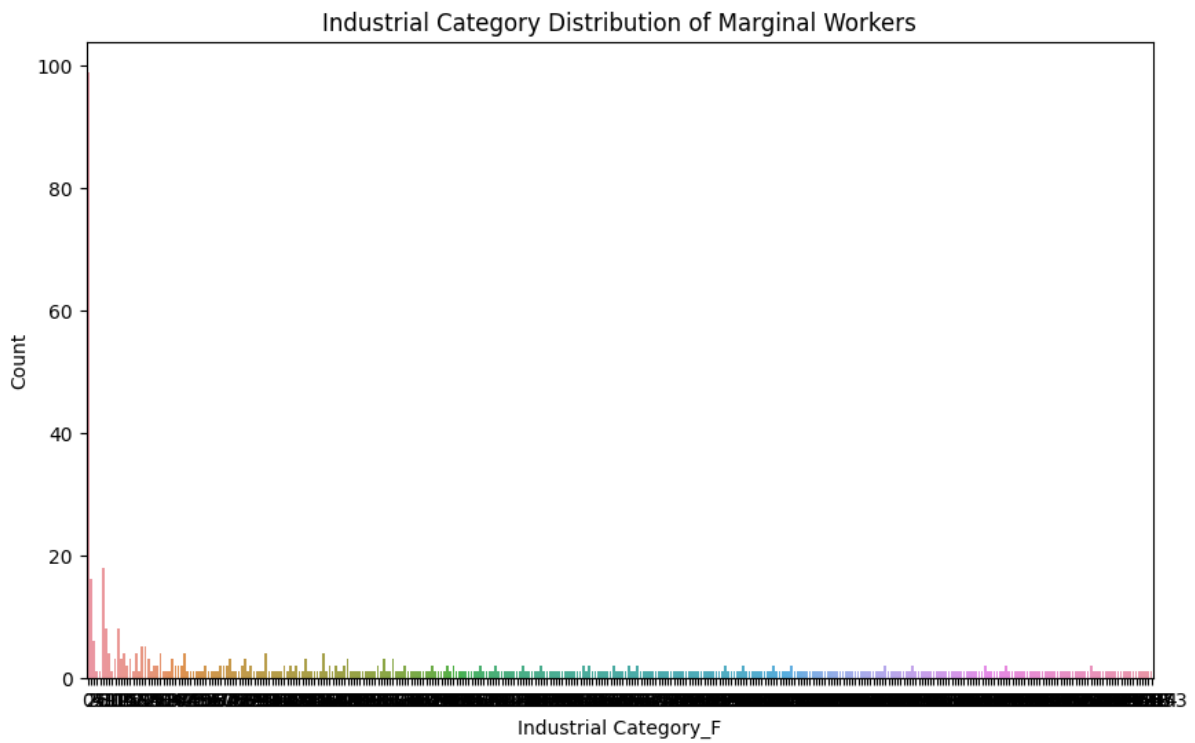Industrial Category Distribution of Marginal Workers
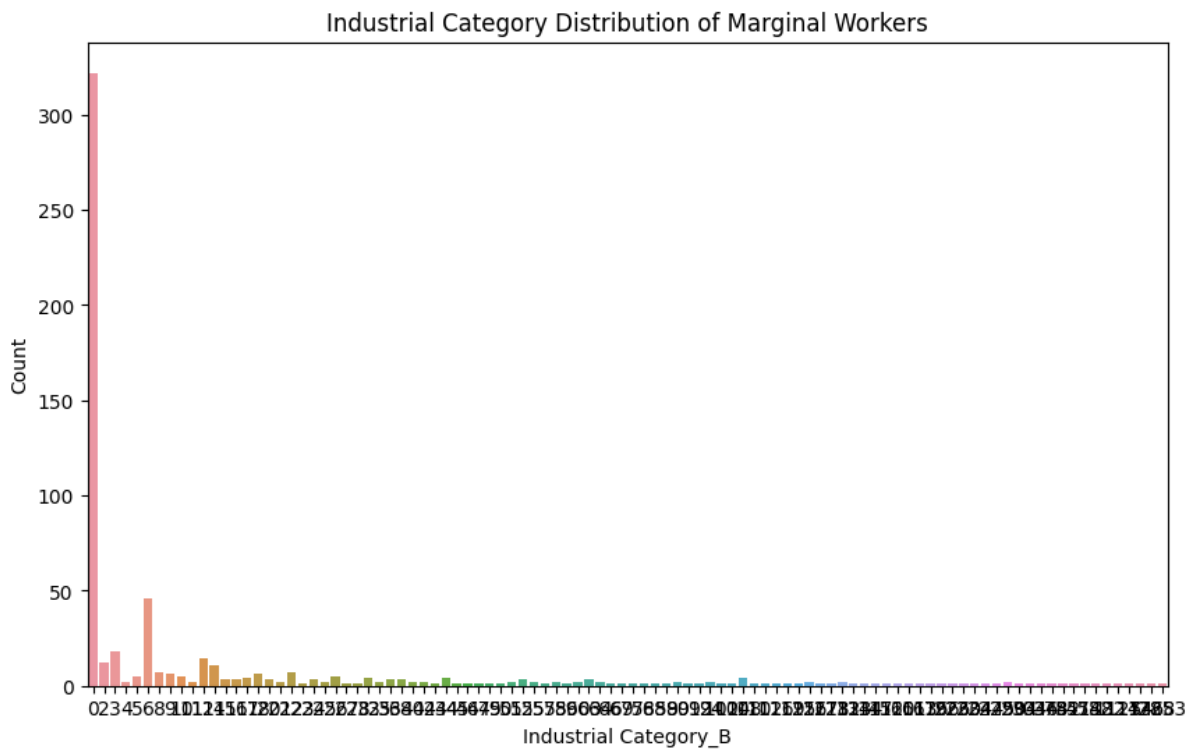
```
plt.figure(figsize=(10, 6))
sns.barplot(x=industrial_category_distribution_C.index,
y=industrial_category_distribution_C.values)
plt.xlabel('Industrial Category_C')
plt.ylabel('Count')
plt.title('Industrial Category Distribution of Marginal Workers')
plt.show()
```


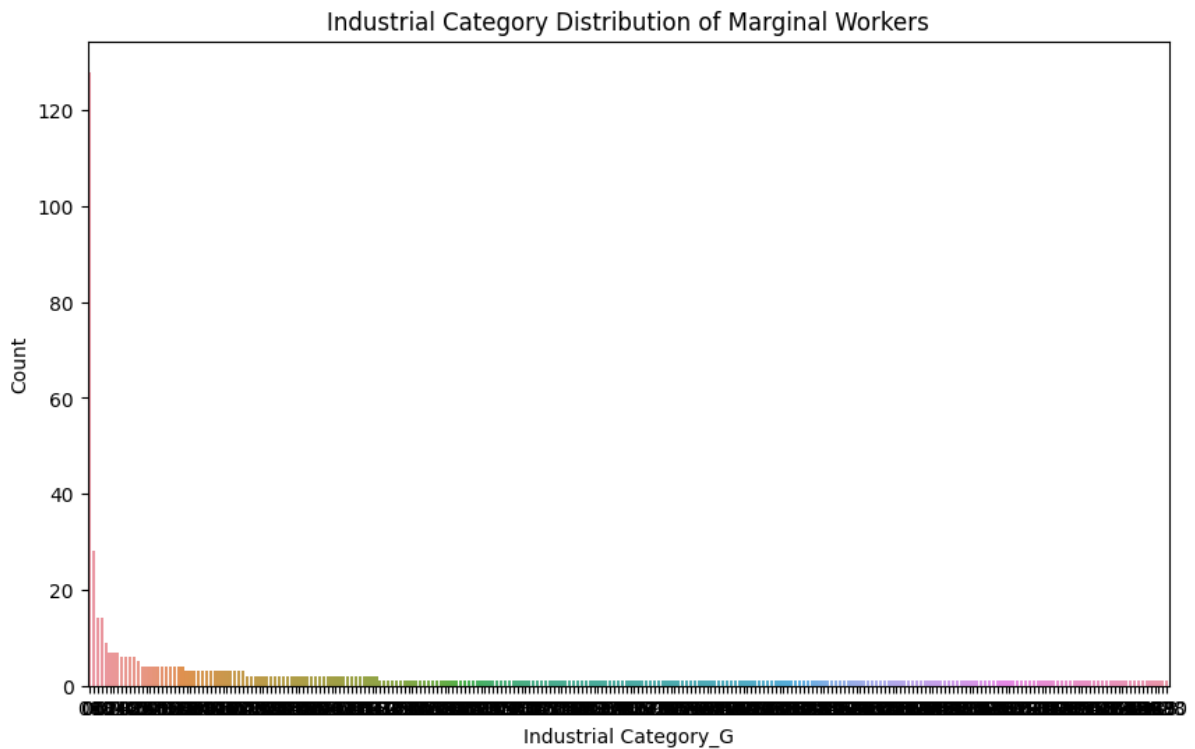Industrial Category Distribution of Marginal Workers

```
plt.figure(figsize=(10, 6))
sns.barplot(x=industrial_category_distribution_D_E.index,
y=industrial_category_distribution_D_E.values)
plt.xlabel('Industrial Category_D_and_E')
plt.ylabel('Count')
plt.title('Industrial Category Distribution of Marginal Workers')
plt.show()
```
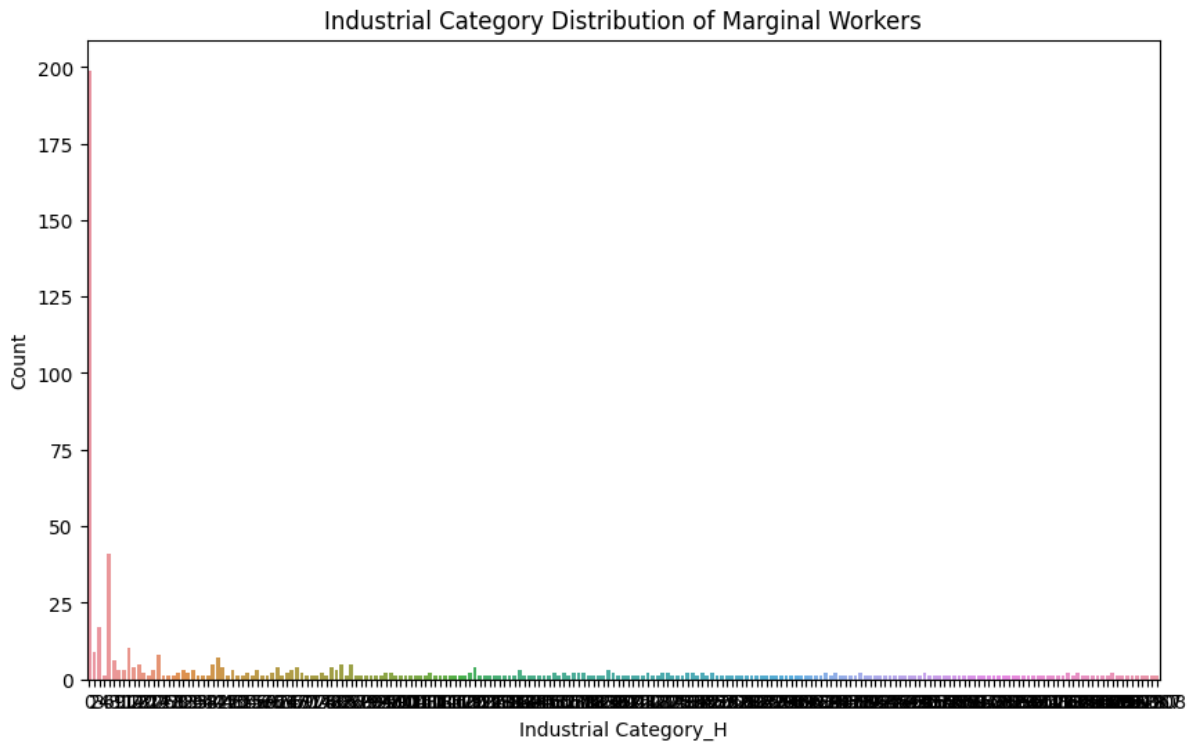


```
plt.figure(figsize=(10, 6))
sns.barplot(x=industrial_category_distribution_F.index,
y=industrial_category_distribution_F.values)
plt.xlabel('Industrial Category_F')
plt.ylabel('Count')
plt.title('Industrial Category Distribution of Marginal Workers')
plt.show()
```

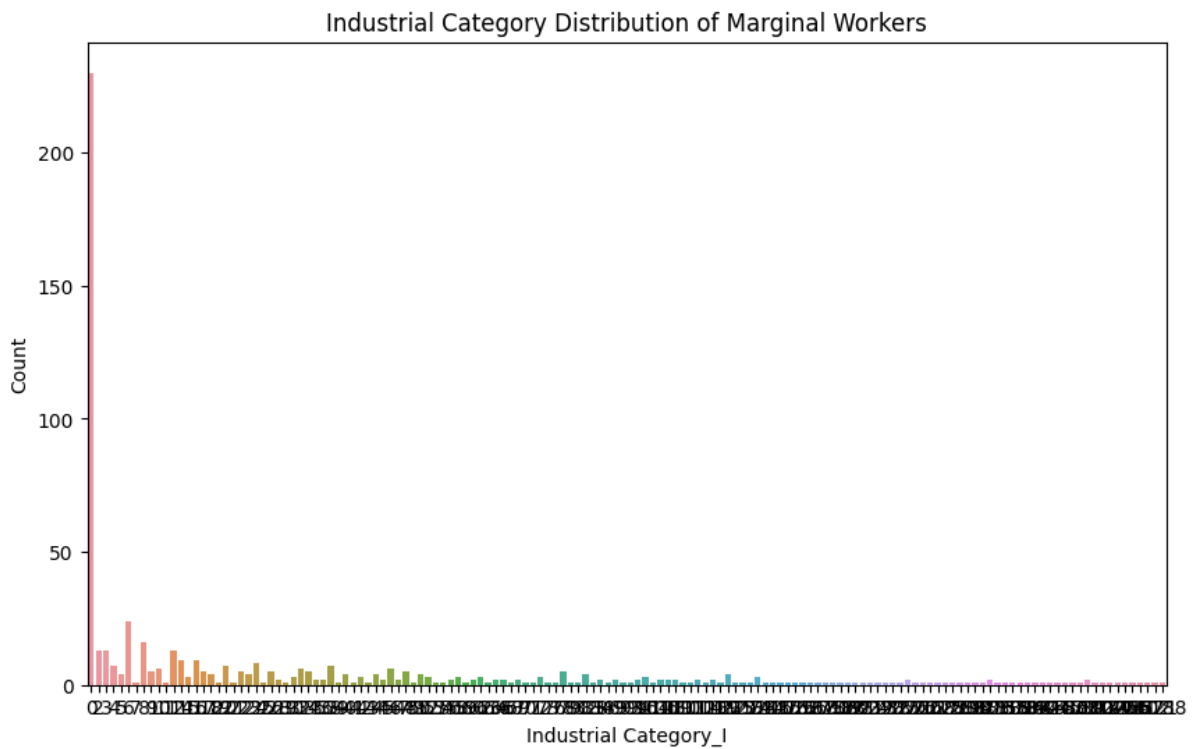## Industrial Category Distribution of Marginal Workers


```
plt.figure(figsize=(10, 6))
sns.barplot(x=industrial_category_distribution_G.index,
y=industrial_category_distribution_G.values)
plt.xlabel('Industrial Category_G')
plt.ylabel('Count')
plt.title('Industrial Category Distribution of Marginal Workers')
plt.show()
```

Industrial Category Distribution of Marginal Workers

```
plt.figure(figsize=(10, 6))
sns.barplot(x=industrial_category_distribution_H.index,
y=industrial_category_distribution_H.values)
plt.xlabel('Industrial Category_H')
plt.ylabel('Count')
plt.title('Industrial Category Distribution of Marginal Workers')
plt.show()
```


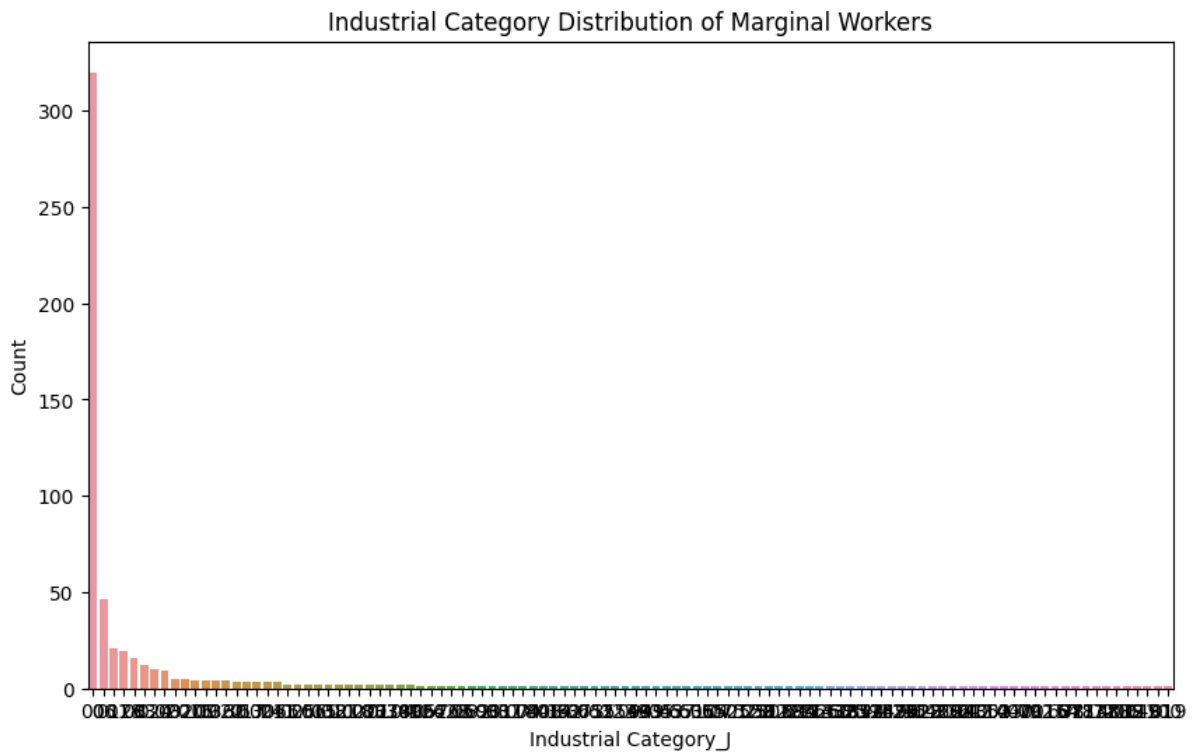Industrial Category Distribution of Marginal Workers

```
plt.figure(figsize=(10, 6))
sns.barplot(x=industrial_category_distribution_I.index,
y=industrial_category_distribution_I.values)
plt.xlabel('Industrial Category_I')
plt.ylabel('Count')
plt.title('Industrial Category Distribution of Marginal Workers')
plt.show()
```

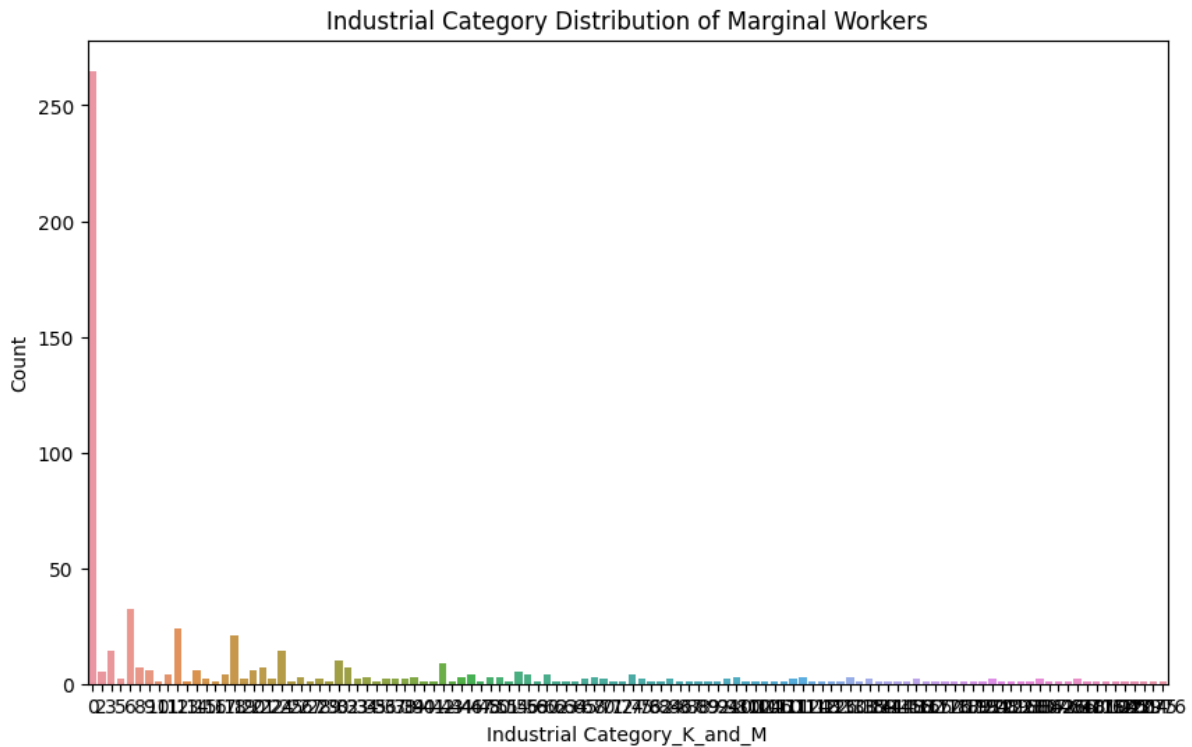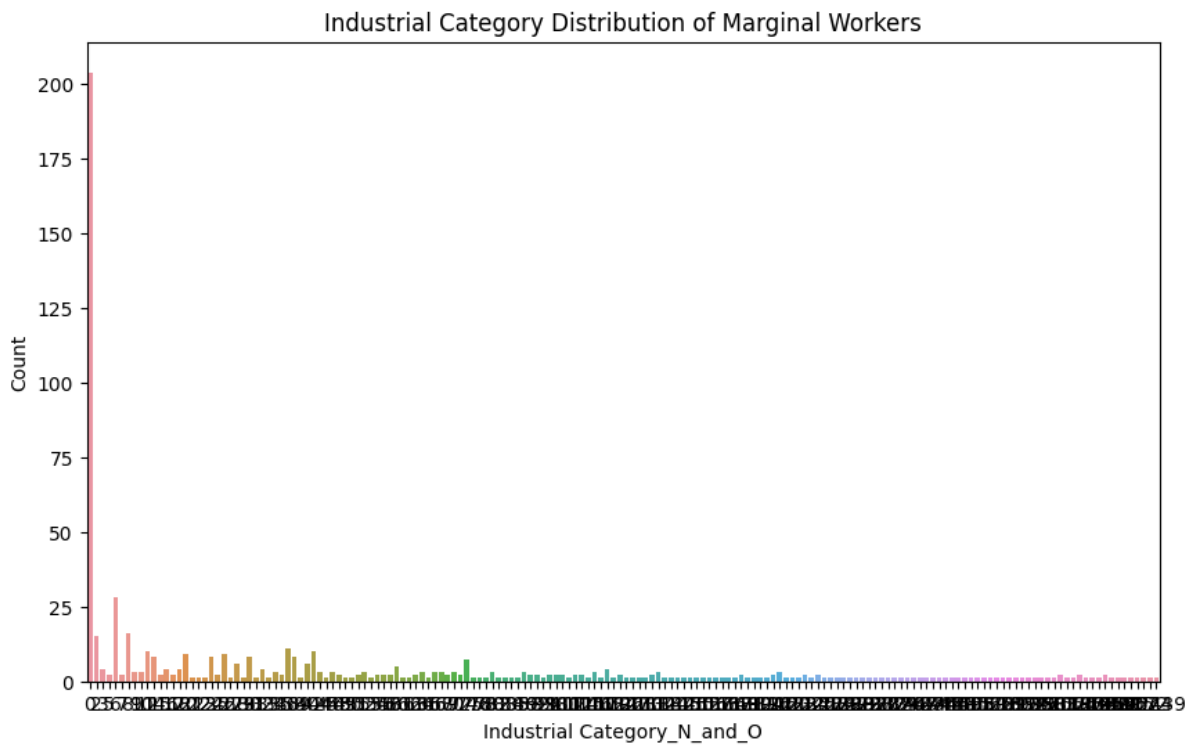Industrial Category Distribution of Marginal Workers

```
plt.figure(figsize=(10, 6))
sns.barplot(x=industrial_category_distribution_J.index,
y=industrial_category_distribution_J.values)
plt.xlabel('Industrial Category_J')
plt.ylabel('Count')
plt.title('Industrial Category Distribution of Marginal Workers')
plt.show()
```
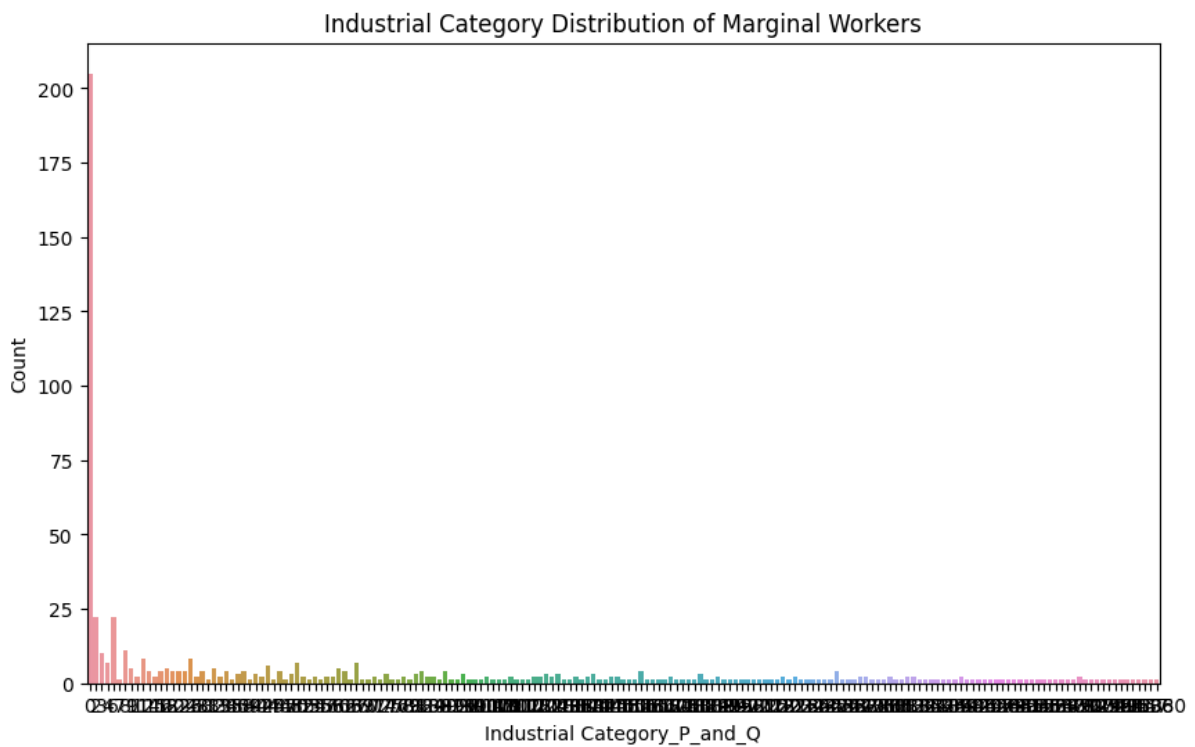

Industrial Category Distribution of Marginal Workers

```
plt.figure(figsize=(10, 6))
sns.barplot(x=industrial_category_distribution_K_and_M.index,
y=industrial_category_distribution_K_and_M.values)
plt.xlabel('Industrial Category_K_and_M')
plt.ylabel('Count')
plt.title('Industrial Category Distribution of Marginal Workers')
plt.show()
```


Industrial Category Distribution of Marginal Workers

```
plt.figure(figsize=(10, 6))
sns.barplot(x=industrial_category_distribution_N_and_O.index,
y=industrial_category_distribution_N_and_O.values)
plt.xlabel('Industrial Category_N_and_O')
plt.ylabel('Count')
plt.title('Industrial Category Distribution of Marginal Workers')
plt.show()
```

Industrial Category Distribution of Marginal Workers


```
plt.figure(figsize=(10, 6))
sns.barplot(x=industrial_category_distribution_P_and_Q.index,
y=industrial_category_distribution_P_and_Q.values)
plt.xlabel('Industrial Category_P_and_Q')
plt.ylabel('Count')
plt.title('Industrial Category Distribution of Marginal Workers')
plt.show()
```

Industrial Category Distribution of Marginal Workers

```
plt.figure(figsize=(10, 6))
sns.barplot(x=industrial_category_distribution_R_to_U.index,
y=industrial_category_distribution_R_to_U.values)
plt.xlabel('Industrial Category_R_to_U')
plt.ylabel('Count')
plt.title('Industrial Category Distribution of Marginal Workers')
plt.show()
```


Industrial Category Distribution of Marginal Workers